

AN INTRODUCTION TO ECONOMICS

BY

GRAHAM A. LAING, M.A.

FORMERLY INSTRUCTOR IN ECONOMICS AND HISTORY
UNIVERSITY OF CALIFORNIA



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PREFACE

THIS book is designed as an introductory treatise on the science of Economics. In its preparation the author has had constantly in mind the demands of secondary schools for a textbook that lays stress upon the discussion of economic principles with especial reference to American conditions.

Two aims have been followed. First, to give a working basis in the knowledge of the methods and terms to be used, and of the content of the subject, such as society as a developed organism, the laws of production, the methods and organization of production and exchange. The growth of productive methods from the time of communal working, through domestic manufacture to the factory system, has been carefully discussed. This discussion shows how manufacturing has developed from small units with hand labor to production on a large scale by machinery, which has resulted in the very large increase in trades and industries. The meaning of the terms *production* and *value*, and the laws which govern the production of commodities, have been carefully explained.

The second aim has been to present the methods employed in the application of economic principles, with especial reference to exchange. In dealing with the banking system, for example, a comprehensive account is given of the Federal Reserve System which

has played so important a part in the commercial organization of the United States during the past few years. Banking, as a general subject, has been considered from the point of view of its function rather than of its technique.

Because of the importance of international trade in the future economic development of American industry, careful attention has been given to the principles involved, as well as to the closely related subject of foreign exchange.

Throughout the book emphasis has been placed on the fact that all economic organization and industry are only a means to an end, and that, therefore, the welfare of those who carry on production must be given consideration. Labor problems have been treated without bias, as have also the suggestions for the reconstruction of society. Exhaustive treatment of these subjects in a textbook of this kind is impossible, but it is hoped that the student will feel that he has sufficient basis on which to build a real knowledge of those problems with which he will, later on, be called upon to deal.

Thanks are due to Professor Solomon Blum of the University of California for his interest and kindness in reading the manuscript, and to Professor F. R. Macaulay, for helpful suggestions and criticisms.

GRAHAM A. LAING

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AN INTRODUCTION TO ECONOMICS

CHAPTER I

THE MEANING OF ECONOMICS

Statement of the Problem of Living—Most of the years of a man's life are occupied in the solution of the pressing problem of gaining a living. There is no more important problem to solve, and the fact that it is always solved in a more or less satisfactory manner does not detract from its importance. In all ages and places the provision of the fundamentals of life—food, clothing, and shelter—has been a paramount consideration, more pressing, perhaps, in primitive times when man lived from hand to mouth, but nevertheless essential in the highest civilization.

But the problem is not merely to gain a living somehow: it is to gain it with the least effort and in the fullest possible degree. Our lives are fuller and more worth living than those of the earlier inhabitants of the world who strove with the primal forces of nature. We have learned to subdue nature, to understand her, and to use the abundance of her resources to a greater extent than ever formerly. Yet we have still a vast amount to learn. We have not yet used to anything like the greatest possible degree the knowledge that

our scientists have gained for us. Probably the bulk of the inhabitants of the modern world still live from hand to mouth as did their prehistoric ancestors, although it is true that they enjoy many advantages which were lacking in more primitive times.

We cannot, therefore, consider the problem solved as yet. And it will not be solved unless very careful attention is devoted to the study of the best means of using the resources of the earth. Our study, therefore, resolves itself into a realization of the fact that we are in possession of a world of vast possibility in the production of the necessities of existence, and a consideration of the best means by which these possibilities may be made actualities not only to a few individuals, but to all the inhabitants of the world.

Definition of Economics — *Economics*, therefore, may be defined as the *study of man in regard to his activities in gaining a living*.

We must be careful, however, to see that we do not narrow our study to the provision of the physical necessities of existence. It is true that a man can live on a certain minimum of food, clothing, and shelter. If his food be sufficient to keep body and soul together and his clothing adequate to protect him from the extremes of climate, he can live. But man does not live by bread alone. Much more goes to the fulfillment of the highest possibilities of life. Variety in food, convenience and art in clothing, space and beauty in architecture are becoming more and more necessary. Literature, art, music are all real necessities although the physical being can be supported without them. In short, man wants to do more than exist; he wants to

live; to gain the fullest possible returns from the exertion of his powers.

The study of economics is not mercenary or ignoble. The whole of the graces and beauties of life are dependent upon a sound basis of economic life. To put it crudely, the pursuit of wealth for its own sake may be unworthy and mean, but without wealth all the better sides of life are impossible.

Economics a Social Science—Consequently economics is related to all other social sciences. It is related to history, which is the record of the past activities of man; it is related to psychology, which is the study of his mental processes; it is related to geography, which is the study of the earth upon which he lives; it is related to ethics, which is the study of his morals; and to religion, which is the study of his hopes and aspirations.

The fact of these relations, however, does not prevent us from studying economics as a separate science. It differs in some important essentials from the other subjects. It differs from history in that it is as much concerned with the future as with the present or past, and yet its basis is in history, for without history we cannot interpret the present or attempt to see our way in the future. Economics utilizes geography as the science which explains the phenomena of earth resources with which man as an economic animal must deal. Psychology is essential as an instrument whereby we can understand the mental processes which lead to man's actions. And ethics and religion provide the aims towards which economic activity should lead.

This does not mean that the study of all these subjects in careful detail is necessary for the understanding of the main principles of economics, but it does emphasize the fact that economics is a branch, and not the least important branch, of the great group of sciences which are generally known as the social sciences.

Economics is peculiarly a social science, in that it concerns man, not as an individual, but as a society or group. The vagaries of action in the individual are impossible to predict, but the action of a group under given circumstances can often be predicted with almost mathematical accuracy. This fact must be constantly borne in mind. In economics we are not dealing with any particular Mr. Smith or Mr. Robinson, but with man as averaged in groups. The insurance company with a hundred thousand policyholders cannot say which particular policyholder will die in any given year. But it can predict within very close limits how many of the policyholders will die in that year. In fact, if it were not able to do so, there would be no possibility of the existence of an insurance company.

If a banking institution in a certain city should fail, it would be impossible to say how the failure would affect the individual depositors and shareholders. But it would be a much easier matter to predict how the failure would affect the commercial community in which the bank was situated. The individual man is affected by all sorts of private and individual considerations. But these cancel one another in the large group, and only those effects which are directly the result of the economic cause are seen. Hence in our study we can afford to ignore all private considerations.

But while we ignore them, we must not be blind to their existence. We must constantly realize that we are dealing with averages. This is a commonplace of science. In chemistry we study the individual elements although probably most of them are seldom found in the pure state. In physics we study simple laws of motion before we consider the effects of modifying forces.

The Subject Matter of Economics — We may now turn to the question of the nature of the material which forms the subject matter of economics. Without exhausting the material, we may say that, fundamentally, economics examines into the causes which affect the production, distribution, and consumption of wealth; and in that examination, the study of the organization of industry and trade, the mechanism of exchange, the relations between employer and employed is essential. The nature of the control exerted upon economic processes by individuals and by governments falls naturally into its place in the general study.

All social existence necessitates a certain amount of organization and government, and the proportioning of the expense of securing this organization and government also forms part of the study of economics. That is to say, part of the subject consists in the study of the extent and methods of taxation, and part also in the extent and nature of governmental expenditure.

It will readily be seen, therefore, that economics touches very closely upon the allied subjects of political science and history. The basis of the study must be in history, however. Nature does not progress by leaps and bounds, but by slow processes, and the

development of a civilization is no exception to the rule. Each institution is more a growth than an invention. We can trace our present institutions back to the past, and show how the gradual changes have been made to secure the remedies for the faults which have appeared with varying conditions. No institution is ever perfect; all are adaptations of older ideas to new conditions. And so we cannot understand our existing institutions without understanding also the conditions which gave them birth.

We are studying economic conditions and institutions, however, and are not concerned with institutions which have no economic importance. We are not called upon to make an exhaustive study of all the historic influences which have helped to mold the present civilization. We are concerned merely with that portion of history which may be called economic history. In other words, we must study those historical conditions which have directly led to the establishment and growth of our modern economic organization. Again, in this connection, we must remember that economic history is only a part of general history. In the same way religious history is a part, as well as constitutional and legal history. We are not supposing that all development is due to economic conditions, but we do suppose that economic conditions have had a very important influence upon our development, and that they will continue to do so.

Economic Laws — In the study of this historical development, the economist is not interested merely in facts. What he aims at is the correlation of facts so that he can trace the causes which have produced the

effects he wishes to study. Just so the scientist is not interested in the phenomena which he investigates purely for themselves, but for the purpose of explaining the phenomena, and evolving from his continued studies the laws which govern the actions of nature. The scientist seeks to discover scientific laws. The economist seeks to discover economic laws.

There are two meanings which we can attach to the word *law*. We may speak of laws as a legislator uses the term. That is, we may consider them as commands laid down by those in authority to be obeyed by the people. A scientific or natural law is not of this nature. The scientist does not say that all bodies shall be mutually attractive but that, on the contrary, all bodies, as a matter of fact, are so. In other words, the legal law is a command which is often disobeyed and penalties are imposed on the disobedient. The natural law is never disobeyed and consequently there are no penalties for disobedience. The natural law states that, given certain causes, certain results must ensue. It is this latter idea of law which is used in regard to the term *economic law*. An economic law is a *statement of the tendency for certain economic results to follow upon certain given economic causes or conditions*. It is of the utmost importance to remember this fact if the student is to avoid the common errors in the colloquial use of the term *economic law*.

There is nothing final about an economic law any more than there is about a natural law. Whenever a scientist formulates a new natural law, he proceeds to test its validity by creating the given conditions and then watching for the results. As long as his "law"

always satisfactorily explains the results, it is considered as valid. But the moment a case arises which is not covered by the law, then the law must be restated so that it covers the new facts. This is exactly the case with the economist. His laws are valid only so long as they fit the facts. If they do not fit the facts, then they must either be stated in such a manner that they do fit them, or else they must be discarded altogether.

The Deductive Method — In order that a law once formulated shall stand the tests to which it must be put, it is obviously of extreme importance that the methods by which it is formulated should be sound. Essentially there are two processes of discovering these laws. They may, for example, be formulated on the mathematical method. In geometry, for instance, we postulate certain facts, and from the basis of these postulates, we develop, by a process of pure reasoning, certain conclusions. That is, we use the method of logic, the syllogism. The syllogism consists of three parts. First there is a general statement; this is followed by a subordinate statement related to the first. From these two statements a conclusion is reached. Let us take an example of such reasoning in order better to understand the method.

The Syllogism — The general statement is usually termed the Major Premise, the second or subordinate statement is the Minor Premise, and the third is the Conclusion.

Major Premise. True colonization is impossible unless permanent residence of the colonist is possible.

Minor Premise. Permanent residence of British colonists in India is impossible on account of the climate.

Conclusion. British occupation of India cannot be true colonization.

Now the only way in which we can test the truth of this conclusion is to see whether it fits the observed facts. In this case the conclusion is sound, for it satisfies all the facts. But sometimes we find that the conclusion is not justified by the facts. For example, take the following argument.

All workmen desire the highest wages they can get.

All workmen are free to move wherever they will.

Therefore a rise in wages in one part of a country will attract workmen from other parts.

In this case the facts do not always agree with the conclusion. Either something is wrong with our conclusion, or else with our premises. Though we may admit the general truth of the major premise, we cannot altogether admit the truth of the minor. There may be no legal objection to the free movement of workmen from one place to another, but nevertheless there are many other objections which tend to prevent such movement. A workman may not wish to leave his present home, or his friends; he may not know of the rise in wages in the other place; there may be conditions of climate or situation which make the other place less attractive, and so on. Hence our conclusion is not justified because the premises are not complete.

It is obvious, therefore, that we must exercise great care in examining our premises before we draw our

conclusion. And when we have so examined our premises, then we must apply the conclusion to the facts. This is always the ultimate test. If our conclusion, or "law" does not fit the facts, then it is worthless, no matter how logically it may be drawn.

The Inductive Method — This mathematical method of reasoning is usually called the *deductive method*. But it is not the only way in which we can formulate those economic laws about which the greater part of our study is concerned. If we note that in past ages a certain result has always followed upon certain causes, we may believe that in the future there is every reason for supposing that that result will continue to follow on the same cause. To take a concrete example, suppose that, on examination, we find that every time slave labor has been abolished and free labor substituted, there has been an increase in efficiency of labor and generally a more abundant and better production; and if we further note that in all cases where there has been an increase in individual freedom the product of the labor has been improved in quantity and in quality, then we may formulate the "law" that "free labor is more efficient than slave labor." Now it must be noted in this case that there is no attempt at deductive reasoning. We have merely observed certain facts and seen that in every case the same result has followed upon the given causes. There is always a possibility, of course, that in some future time we may find that the result does not follow as before. In that case, we must restate the law so that it meets the new condition, or else we must try to see whether there are not some other circumstances present which have been absent

in the previous cases from which our law has been formulated.

This may seem an unscientific method of reaching conclusions, but in fact it is one of the commonest of the methods used in natural science. The familiar story of the discovery of the law of gravitation by Newton is an instance. Newton noticed that without support the apple was bound to fall from the tree, and that similarly any other body suspended above the surface of the earth was bound to fall as soon as its support was removed. From these elementary facts and from further close observation, Newton was able to formulate the law that all bodies tend to attract one another with a force varying inversely as the square of the distance, and directly as the mass of the bodies. Test after test produced the same result and hence we have accepted the law as true.

The same method must be used in the discovery of economic laws *and the same tests applied*. The constant application of the law to existing facts tends to make the statement of the law more and more satisfactory. This process of discovering economic or other laws is called the *inductive method*.

Value of Economic Laws — A natural question to ask is, what is the value of these economic laws? Without systematization there can be no real knowledge. In fact science is distinguished from ordinary knowledge merely because it is systematized or organized. The value of the laws discovered in physical science is that not only can the present be explained, but the future can be predicted. If the economic laws are to be of any real value, they must enable

us to avoid errors in development by predicting the future, at any rate to the extent of warning us of dangers which from all past experience seem bound to occur if a certain course is persisted in. In other words, the discovery and statement of economic laws helps to prevent the recurrence of past mistakes and to secure a sound and steady development in the future.

From this, there arises the question of the scope of the economist's activities. Is he merely concerned with the analysis of past and existing economic conditions and reducing them to order, or should he also attempt to show how the existing system can be improved?

The Scope of Economics — Primarily we may say that the economist is purely an analyst. We do not expect the professor of physics to invent new machines. We leave that to the inventor or engineer who applies in practice what the professor of physics teaches and discovers in theory. Similarly we may say that the statesman applies in practice the theories developed by the economist. But the economist is a human being with a human being's inability to limit himself absolutely to one thing. He sees perhaps more clearly than any other the faults of the existing system of organization, for no one will attempt to deny that it has great faults. Moreover, he sees the evil effects of remedies suggested by people who have no clear knowledge of the causes of the evils, or of the remedies which have been attempted in the past.

The economist finds himself intrenching upon the scope of the student of ethics and often of that of the

preacher, but he limits himself to a definite line of action. He is concerned primarily with the development of economic organization, but wherever that organization is affected by ethical and religious ideas, then he must consider the effects of those ideas.

Summary — We may now sum up the conclusions we have arrived at in this chapter. Economics is the science which deals with man in regard to his means of gaining a living. It is concerned, therefore, with such subjects as the production, exchange, and distribution of wealth; the organized relations between employer and employed; the economic actions of government in securing a revenue and then in expending that revenue; and, in short, with all matters that affect the physical well-being of mankind.

Economics deals with societies of men rather than with individuals, but recognizes that societies consist of groups of individuals. And so, while no particular Mr. Smith or Mr. Robinson can be considered, the welfare of all the Smiths and Robinsons is the ultimate aim of all social study.

The economist analyzes the past and present economic conditions and organizations with a view to explaining them and to pointing out the reasons for their failure, or at least for the constant change which these institutions and organizations have undergone.

And finally, the economist, realizing that the present system is very far from being the most satisfactory possible, endeavors to give sound criticism to all schemes of proposed reform and also to formulate schemes himself, basing those schemes or suggestions on his scientific knowledge of the present.

We have therefore undertaken a study of a science which, while it is not to be regarded at present as being complete, is one of immense importance to the world. Without it, all efforts at improving the condition of mankind will be of little avail.

CHAPTER II

THE THEORY OF ECONOMIC DEVELOPMENT

Economic History — A good deal was said in the last chapter regarding the importance of history in the study of economics. It is impossible, even if it were desirable, to give a complete account of economic development in the present study. Nevertheless it is possible to indicate the general theory of economic development so that the reader may have the necessary basis for the future study. History is not a mere haphazard study of unrelated facts. Facts in themselves are not important; it is in their significance that their importance lies. The whole value of the study of the facts and events of history lies in the possibility of determining the nature of historical progress. The antiquary is interested in the life of the past apart from all consideration of the influence of the past upon the present, but the antiquary and his studies are of no importance to the economist. What we want to find out is whether there are any laws of development; that is, whether economic growth is the result of accident or of a definite method of development.

Nothing happens in nature without a cause. The effects of certain causes become themselves the cause of future events and if we could discover it, we should find that there is a definite chain of causes and effects

going right back to primitive history. The tracing of that chain of events belongs to the study of history, but the results of the historian's work must be used by the economist.

We can realize that there is a definite line of progress leading from a simple organization to a more complex until we arrive at the extreme complexity of the modern economic structure. What that line is we must now proceed to indicate.

The Four Stages of Development — In the main we may distinguish four chief periods in the development of the human race. The first is the period of dependent life, the second is that of pastoral life, and the third the agricultural period. The final stage is that of industrial life.

The Dependent Period — In primitive times man was dependent upon what he could reap from nature *without contributing himself*. He obtained his food either from the roots and fruits which grew wild or from hunting wild animals. The results of the chase brought him his food and his clothing, as well as, in those climates where shelter was necessary, his shelter. He ate the meat of the animals he killed and used the skins either to clothe himself or to provide a tent in which to sleep. He contributed nothing to nature. He took what existed, and left the provision of his future needs to the powers of unaided nature. His life was, therefore, entirely dependent upon the simple, natural productions, and existence was necessarily hand to mouth. In other words, he lived the life of the wild animal, producing nothing himself. If nature were bountiful, he lived well. If nature were niggardly,

then his existence became a fight against starvation. Nature unaided tends in most climates to be niggardly, and hence the whole of life was taken up with the struggle for existence.

The Pastoral Period — The first great development took place when man learned to tame the hitherto wild animals. He ceased to be entirely dependent upon the chase. His food and clothing became more certain and, what was of infinite importance, he was able to associate in larger groups than formerly. Life ceased to be the absolute hand-to-mouth existence that it was in the more primitive times. The comparative leisure enabled him to add to his knowledge and to develop his mind. The pastoral life in itself tended to encourage the contemplative form of life, and hence paved the way for a higher type of mind as well as for a better nourished body. We do not need to depend entirely upon conjecture to know that these two stages of development actually existed. We know that the Indians of America lived very largely in the dependent stage. They lived upon the fruits of the chase, clothing themselves and providing their tents from the skins of the animals they killed. Many existing races still live in the pastoral stage. Perhaps as good a description of the life as can be given is contained in those chapters of the book of Genesis which deal with the life of Abraham and Lot. The constant traveling from place to place as pasture after pasture is exhausted; the gradual growth of the flocks of each until eventually there is not room for both in the same district; and the consequent separation, are typical of the life.

It is well to notice in this connection that in the more primitive method of living the group is smaller. The hunting life does not support a large group. Game moves away where the danger is too great and hence the group must split up in pursuit of new hunting grounds. The pasture is exhausted rapidly with large flocks, but nevertheless the pastoral group is larger than the hunting group.

The Agricultural Stage — When the next stage of development arrives, there is opportunity for the growth of a much larger group. The pastoral group is less absolutely dependent upon the gifts of nature than the hunting group but the agricultural stage means a still greater addition to the human effort with a consequent lessening of the dependence upon unaided nature. The farmer tills the soil and so makes greater use of the powers of nature. He is not compelled to move constantly from place to place in order to supply the needs of his existence. More people can be cared for on a given area than under either of the preceding stages. Hence we find that the groups are larger and the consequent closer association of mind with mind produces a still higher type of intelligence than has been possible before. It is true that the earliest forms of agriculture were extremely crude. Soil was very rapidly exhausted by continuous cropping with the same crops, and hence there were movements to new, virgin soil. But the gradual advance of agricultural knowledge made it possible to prolong the productive life of the soil and so the necessity to move to new lands became less and less frequent.

The Industrial Stage — This gradual development

of economic organization led to the growth of that principle which has been of the greatest service in rendering possible the complex life of the present day. The principle is that of the *division of labor*. Even in primitive times a certain amount of specialization of labor was possible. We read in accounts of primitive tribes, such as those described in Longfellow's *Hiawatha*, that even in groups that supported themselves entirely by hunting there were members of the group especially skilled in the making of instruments of the chase — makers of arrowheads, for instance. Obviously the man who devoted most of his time to the making of arrows could not spend much time in actual hunting, and so he had to exchange the products of his industry for those of the hunters. And the more skillful became the arrow maker, the more dependent upon him were the actual hunters themselves whose time was taken up in the use of the weapons provided by the arrow maker.

Definition of Economic Unit — This becomes more and more true as the specialization advances. When the maker of weapons is supplemented by the maker of agricultural implements, and he in turn by the tent maker and later the builder, we notice a gradual increase in the interdependence of the members of a community. When we find one group which provides for itself all the necessities of life, without being dependent to any extent upon the produce of any other group, we call that group an *economic unit*. With each improvement in organization there is an extension of the economic unit. The more the individuals who compose a unit specialize in some form of production

or other, the more are the members of the group dependent upon each other. And also, the more members can the group sustain.

Characteristics of Development — The natural development resultant upon this increase in specialization or division of labor is the rise of the latest stage in existence, the *industrial stage*. In this stage of development we see a steadily increasing interdependence of the members of a group and a steadily increasing number of members in the group. We are at present living in the industrial stage of civilization which seems to be the ultimate form. Specialization is carried to a very high degree. Instead of having a very few varieties of employment, the possible varieties are infinite and are increasing day by day. Industries which in the time of our fathers were units are now subdivided to a degree undreamed of in the past generation. A shipbuilder, for instance, no longer designs the boat, cuts the lumber, shapes and erects it, and finally paints the hull. The design is cared for by a naval architect. It is drawn by a draftsman. The drawing is printed in a blue-print office; the blue prints are used by the loftsmen to make the templates; the templates are used by the shipwrights to make the shapes and so forth, until the list of trades concerned in the production of ships looks like a catalogue of all possible industries. This instance could be multiplied to an unlimited extent. In 1776, Adam Smith was amazed at the number of operations which were necessary in the manufacture of a common pin. He enumerated eighteen. It is safe to say that there are a hundred now.

Relations between the Stages of Development — It must not be thought that these stages of development are definitely distinct from one another. At the present time we make use of all three methods of securing our necessities. The fish we eat are procured by methods comparable to those of the hunting stage of existence, although it is true that our means of catching fish are better than those of primitive times; and it is also true that we do what was not thought of in purely dependent times — we try to restore what we take from the sea by cultivating the spawn of fish, as in the salmon trade, for instance. Our meat is the product of the pastoral life, although the cowboy of the western plains is hardly the same type as the Arabian shepherd. And our crops are the product of the agricultural stage. Each succeeding stage is rather superimposed on the previous than a substitute for it.

Variations in Rate of Development — One distinction is important, however. Progress was very slow in primitive times. It is very rapid now. The change from the dependent to the pastoral life probably occupied many centuries. The development of primitive agriculture was probably much quicker in following, and the germs of the industrial stage were to be seen before the agricultural stage had made much headway.

In the industrial stage the development has been increasingly rapid. There is more difference between the workman's occupation in the twentieth century and in the early nineteenth, than between the life of the eighteenth-century laborer and that of the twelfth-century workman. This is largely because the development is ceasing to be unconscious as it was in the

earlier times and is becoming increasingly conscious. That is to say, in early times changes were very slight and were introduced very gradually, so gradually, in fact, that they were not noticed. It is probable, indeed, that they would not have been introduced at all had they been noticeable. Primitive man was resentful of change and even at the present day we notice a much stronger tendency to conservatism in backward peoples than in more enlightened races. When changes were actually noticeable as definite innovations, they were invariably resisted and only succeeded by their inherent advantages gradually overcoming the reluctance of the people to change. The higher the civilization, the less reluctance is there to a change which promises an improvement. At the present time in all advanced countries, changes in organization and in methods of production have ceased to be accidental and are consciously adopted and even sought.

Modern Civilization Dynamic — The older civilizations conceived themselves as static. In other words they believed implicitly that they were the final word. We realize now that our civilization is dynamic. That is, we know that we cannot stand still. All change is not improvement, but there cannot be improvement without change. We are not satisfied with our lives. We wish constantly to improve them and are constantly seeking the best means by which an improvement can be made.

This is seen in the amazing number of inventions which are daily patented in the principal countries of the world and particularly in America. No sooner

is a machine invented than attempts are made to improve it. All those industries which have been formerly carried out by individual skill are being as far as possible reduced to a routine of motion, with a view to the supplanting of human effort by machinery. Take the art of printing, for example. Originally the type blocks were cut by hand. Now they are cast from molds. Originally they were set up by hand. Now they are set up by means of the linotype or the monotype machine. We use electrotypes where formerly we used hand engravings. We fold the paper and bind it by machinery instead of by hand.

Sufficient has now been said to illustrate the method of development. We must now ask whither is the development leading, or what is the object at which all this progress aims?

Growth of Civilization Accompanied by Increase in Needs of Man — The advance of civilization is an advance in the needs of man. The more highly civilized he is, the greater is the number of his wants. Primitive man had few requirements and had a great struggle to satisfy these. Modern man has a bewildering number of wants and the possibility of satisfying these wants is much greater than the possibility of satisfying the few necessities of the savage.

Physical and Conventional Necessities — The necessities of the savage are physical necessities. Without them he dies. The man of to-day has many wants which he considers as necessities, but which are not essential to existence. Life and existence were to the savage synonymous terms. They are not so now. We realize more and more fully that man does not live by

bread alone. There are "longings, yearnings, strivings" which must be satisfied. After all, man is a social animal. He is interested not only in himself but in his neighbors and in his surroundings. Mental and social development can only be secured by a certain amount of leisure, a leisure which is impossible when all efforts must be devoted to wringing from a niggardly nature the bare means of subsistence. Hence anything which tends to subdue nature, to gain a greater product with a smaller expenditure of effort, tends to increase the amount of leisure which can be devoted to the production of those things which contribute to mental, social, and emotional development.

The love of knowledge must be fostered, not for the sake of knowledge itself, but because each increase in knowledge gives a greater command over nature and a consequent increase in the satisfaction that man obtains from life. In a struggle for existence there is no place for beauty; everything must be sacrificed to the production of necessities. But in a full life, beauty and art must have their place. A house must no longer be a mere shelter, but a place with a beauty of its own, a delight to the eye as well as a protection from the elements. Music and literature are necessities when the demands of the purely physical being have been satisfied. Life consists more largely in the exchange of thoughts, the influence of mind upon mind, than we are sometimes inclined to believe. There must be free provision for the communion of man with man. In short, our "progress" is *the growth of success in developing the physical and mental man to the fullest possible extent.*

The Economic Problem — The problem which confronts man, then, is this: 'Given a world whose resources are infinite but not all discovered, how to make use of the known resources and discover the unknown, so that each may satisfy his desires to the fullest extent without infringing upon those of his neighbors, and without waste.

To say that this problem is solved is to say that perfection has been achieved and the millennium is at hand. What we have to do in our succeeding study is to examine how far we have succeeded, and, in so far as we have failed, to see why we have failed and how the failure may be remedied.

CHAPTER III

THE COMPETITIVE SYSTEM

In the last chapter we stated the problem which the world has to solve — the provision of the necessities and conveniences of life in as full and free a manner as possible to all its inhabitants, and without waste. To say that this problem is absolutely solved is, of course, untrue. But nevertheless the necessities and conveniences are actually produced, perhaps not so economically or so fully as is possible, and certainly not without very great inequalities in distribution.

The existing system of production and distribution is extremely complex. Indeed it would seem at first glance that there is no system at all, but merely a more or less haphazard production which results in a certain degree of efficiency. As a matter of fact the methods of production and distribution at the present time do not represent a conscious organization of the means of production. They represent rather a gradual growth and development from past times, helped here and there by conscious attempts at remedying the structure of the system as it broke down from time to time.

Still there seem to be certain principles which have governed what arrangement there was in the different periods of growth, and in the present chapter we shall try to see if there are any which can be said to control our present system.

Economic Freedom — The keynote to modern economic life is found in the idea of economic freedom. The phrase must be carefully explained, however, for the idea involved is a direct revolution from that which governed our organization a century ago. In the older society which preceded ours it was believed that each individual had his place. It was the duty of the group to care for the individual and the individual was responsible to the group. This idea may be illustrated by *the gild system*, about which more will be said later. The trade gild regulated the work which each member was to perform and the remuneration he was to receive. The style and quality of the work was controlled to a very large extent and the amount allotted to each member was arranged so that the work should be divided as evenly as possible. In case of the death of a breadwinner of a family, the gild looked after the widow and provided for the care of the children until they were old enough to enter the gild and earn their own living.

When the gild system decayed and finally broke down, the idea of a regulated industry did not disappear, but rather was emphasized by governmental action. Government controlled all industry by stipulating, for instance, what industries should be carried on and how they should be conducted. Industries regarded as of national importance were encouraged by the offer of bounties on the production of those industries or by prohibiting the import of products of competing industries in other countries. Inspectors were appointed to examine the products of the industries to see that they were up to standard. Inspectors

in the wool trade, for example, enforced the governmental prohibition of mixtures in wools. The cloth must be of one grade of wool alone. It must be of a certain width and the bolt a certain length. The very dyes must be of standard quality and color.

Regulation of Industry — Industries regarded as unsuitable for the country were prohibited. In a word, regulation was the main idea in industry. There was not an occupation which in some way or other was not subject to interference by the government.

When industry was revolutionized by the great inventions of the latter part of the eighteenth and the beginning of the nineteenth centuries, manufacturers became more and more resentful of the control exercised by government. They demanded the right to make what products they chose and in the way they chose. They asked that workmen should be allowed to change their occupation as frequently as they wished and to move from place to place at will. They did not ask for bounties to produce their wares. They believed that they had sufficient incentive to production in the profits to be derived from the manufacture and sale of the goods.

Production for Profit Most Satisfactory System — In short they believed that the individual understood his own business a great deal better than any possible government, and a theory was developed to justify their ideas. It is this theory which we must now examine.

At its basis is the belief that the fundamental incentive to all industry is the acquisition of property. It was thought that a man would not work unless he

were to receive for his own use the fruits of his industry. The greater wealth to be achieved in an industry, the more assiduously would the workers in that industry labor. Conversely, if there were no profit to be reaped, the industry would languish and finally disappear. The two propositions were sufficiently well illustrated to give an apparent justification to the idea. In the manufacturing business, notably the textile industries, great profits were possible. These industries developed rapidly from being carried on in private homes as a part-time occupation, with agriculture as a mainstay, to the manufacture in huge factories, with agriculture as a separate industry. The converse was illustrated, for example, in the Irish *rack-renting* system. In this system the farm lands were rented by a species of auction. The landowner offered his land to the farmer who agreed to pay the highest rent. In actual operation rents were offered infinitely in excess of the total possible production of the land. Naturally the farmer when he obtained the land was not able to gain sufficient to pay the rent, and consequently he immediately began to fall into arrears with his payments. The arrears mounted with each month of his occupation and hence no increase in the harvest was sufficient to do more than wipe out a portion of the arrears of rent. If the farmer tried newer methods, or spent money on manures or on additional labor, he reaped no reward, for the increase in the product went directly to the landlord. There was no stimulus to increased production, therefore, and with the knowledge that he could never secure more for himself than a bare subsistence, the farmer sought no more than that. His

cultivation was slight and he made no attempts at improvement. The Irish farming became perhaps the worst in Europe, simply because of the withdrawal of the property stimulus.

The contention that this property stimulus was essential would seem to be proved, but at present we are not concerned with a more careful examination. Later on we shall see that there are other considerations to be taken into account. For the present we shall admit the contention for the sake of the argument.

The next point to be considered is the effect of this indiscriminate production on the general welfare of the community. Would the whole of the needs of the community be satisfied if each individual were left to himself to produce what he wished, how and where he liked? Would there be greater production in variety and extent if governmental control were removed? These were considerations which had to be dealt with.

Basis of Argument in Favor of Production for Profit —

Now we are not dealing with a primitive state, but with an economic system which had reached a high degree of specialization. Each man produced only a small part of his own total needs and relied for the satisfaction of his wants by exchanging his own surplus product for the surplus of others. Naturally each individual wanted to get as much as possible for his surplus, and his gain therefore depended upon the demand which existed for the particular product which he had to exchange. If, for instance, a man was engaged in producing knitting needles, he could only exchange those needles to people who required them. If very

few people wanted knitting needles, then he would probably be left with a supply on his hands and he would find little profit in the undertaking. If he were producing wheat, on the other hand, there was bound to be a great number of people who wished to exchange their products for the result of his harvesting. Hence he would be able to exchange the great bulk of his surplus comparatively easily.

Now the natural result of this method of production would be that each individual in deciding his occupation would look for some industry which would produce something for which there was a great demand. Few people would produce knitting needles and many would produce wheat so that the demand for wheat, which is general, would be satisfied simply because the very extent of the demand would encourage a great number to engage in farming. Similarly the demand for clothes would encourage a great production of clothing materials, whereas the small demand for, let us say, picture frames, would only attract a small number of producers.

Even if we admit this argument, however, there would appear to be a danger that while the general necessities would receive plenty of attention from producers, the less essential but still desirable goods would be neglected.

Limitation to Demand for Necessities — The demand even for necessities, however, is not unlimited. There comes a time when the demand for food, even, slackens. If every one is engaged in producing food, there will only be food produced and consequently there will be no production of clothing or other goods. How is the

proper relation between the production of different requirements to be met?

The Idea of Competition — Let us suppose that a given individual is engaged in producing wheat. He finds after a time that there is a great deal of other wheat, besides his, in the market. If the total amount is still insufficient for the needs of the community, he can still reap all he requires in the way of exchange for his surplus. But if the amount is greater than is required, then he must tempt buyers to buy his own particular portion. To do this, he must reduce his price. But he is not the only one who has wheat for sale. Others also are tempting buyers by reductions in price. If the supply of wheat continues in excess of the requirements of the buyers, the price will steadily fall. A time will come when the price is reduced to a point where the sales will not provide sufficient for his own needs. In other words, his profit will disappear. All wheat sellers' profit is not the same. Some have better farms than others; some are nearer the market than others, or have some special advantage. Hence some of the wheat producers can afford to take a smaller price than others and still make a profit. In the case of the individual with whom we are dealing, we will suppose that the point of vanished profits is reached. It does not pay him any longer to produce wheat. He, therefore, turns his attention to some other industry where there appears to be chance of a greater profit.

The results of this change are twofold. First, there is a falling off in the production of wheat. This is as it should be, for it was evident that the supply of wheat

was too great for the market. There will be other producers in the same position as the individual we have been considering, so the fall in production will amount to that portion of the wheat supply which was produced by those who are now relinquishing farming. The result will be that the others who still continue the production of wheat will be enabled to gain a price for their product sufficient to repay them for the trouble and expense of producing it.

Second, there will be an increase in the production of some other article, the price of which had formerly been high. This is naturally the case, since those who have given up farming will tend to choose that occupation which offers the greatest returns. The fact that they so choose, however, means, as we have said, an increase in the production of that article, and consequently the buyers will have a larger supply to satisfy their needs. As this supply increases, the producers will bid against each other for the custom of the buyers and there will, therefore, occur a fall in price.

Meaning of Competition — It must be noted that the competition which exists is between producers of the same article and between buyers of that article. The producers compete with each other when the supply is large by reducing their prices, and so encouraging buyers to satisfy their requirements from him who offers the cheapest rate. When the supply is small, on the other hand, the buyers compete with each other by offering increased prices, and so lead the producers to sell to him who offers the highest price. No competition occurs between producer or seller and buyer. They are in quite different categories.

Labor Viewed as a Commodity — Now let us consider this system from another point of view. How does competition affect the relations between employer and employee? For the moment we may consider labor as being a commodity just as wheat is. Later on we shall find that labor cannot be so treated entirely, but in the meantime the supposition will not affect our argument. If the supply of laborers is large, then there will be a tendency for the laborers to compete with each other for the existing jobs. Each looking after his own interests will offer to work for a smaller wage in order to obtain employment. If the supply of labor should be small and less than the demand for laborers, then the employers will compete with one another for the laborers by offering higher wages. It should be noticed here, again, that there is no competition between laborer and employer. There is competition between workman and workman, and again between employer and employer.

Claims Made for the Competitive System — It is claimed for this system that a natural equilibrium will be reached in which ultimately the price of all goods offered for sale will be sufficient to remunerate the producer fairly, neither giving him too high a profit nor too small a return; there will also be an equilibrium of wages so that each laborer will obtain a sufficient sum to keep him according to the existing standard of living. It is further claimed that all the needs of society will be satisfied in exactly the right degree, according to their intensity. That is to say, those goods which are absolutely essential in large quantities will attract the greatest number of producers and those which

are desirable but not necessary will attract comparatively few.

The system which we have described is known as the *competitive system*. The main belief which lies behind such an economic organization, or rather lack of organization, is that each individual looks after his own interests and in so doing the needs of society are best met; that if the natural selfishness of the individual is allowed full play, the results to the community will be better than if the governmental organization attempts to regulate production. The system is sometimes referred to as the *laissez faire* method. The phrase arose from the expression of some French economists, that each should be allowed to make (*laissez faire*) what he pleased and allowed to go (*laissez aller*) where he wished.

Some Defects of the Competitive System — Now it will be at once recognized that the description given above is not a satisfactory account of our present organization. There are many modifications which must be made. In the first place, it is assumed that each individual is a capable judge of his own interests and also of equal strength in the struggle. This is obviously not the case. In the early days of the industrial revolution it was soon seen that the weaker members of society were driven to the wall. The wages of the father being reduced, instead of the father seeking new employment in some other industry, the labor of the children was called in to assist. Children were set to work at as early an age as four years. Hours of labor were extended to an almost unbelievable degree. It was not uncommon for children five, six,

or seven years of age to work for sixteen hours a day. Women's labor was also abused. We do not now hear of women working as beasts of burden in the coal mines.

Nor was the system satisfactory apart altogether from the position of the laborer. In the manufacturing world also the system failed to a very large degree. A factory requires a considerable amount of capital before it can be put in operation. If prices are so low that profits disappear, the capital invested in the business is to a very large extent lost. A cotton factory cannot be turned into an engineering plant. It may easily happen, for example, that many factories are working close to the level at which profits vanish. If prices continue to fall, not one factory, but many, must close, and instead of production being reduced merely to a natural level, the production will almost cease only to increase to an undue extent when the swollen markets are exhausted.

Failure of Competition — The results of free competition were seen best in the early part of the nineteenth century. Laborers were badly abused. Employment fluctuated rapidly between overwork and no work at all. Profits also alternated between high rates and the vanishing point. Waste of capital and effort was the keynote to the system. Very soon it was seen that competition did not pay. Manufacturers made agreements among themselves to keep prices up, and to keep costs (principally considered to be made up of wage costs) down. Workmen endeavored to do the same and keep wages up by combinations amongst themselves. In other words, it was realized

with more or less clearness that the individual could not look after himself; he was forced to associate with others.

Nor did people find that governmental control or other alleviation of the evils of the system could be done away with. Private charity helped in a very slight degree to remove the worst of the abuses resulting from an unbridled individualism. Natural feelings of sympathy revolted at the treatment of babies in factories and domestic workshops. The government was forced to institute or amend systems of poor relief and to restrict the free action of individuals in the conduct of their work. Factory acts and education acts were passed to insure an improvement in the treatment of workers. The acts limited hours of labor, first for children and then for women, and finally for men. They secured healthier conditions of work and better protection from dangerous machinery, and so forth.

Change in Principle of Government Regulation —

In the main, however, there was a distinct change from the form of governmental regulation of industry from the older times. Instead of regulating the *nature* of the product, government turned its attention to the *manner* of production. There was still freedom to produce what a person wished, although there is a strong tendency for the government at present to prohibit trades which are considered to be harmful to the community.

This did not mean that the idea of economic freedom was abandoned. It only meant a better interpretation of the word *freedom*. Freedom can only exist accom-

panied with restraint. We do not consider the laws against murder and theft to be breaches of our freedom. We realize, on the contrary, that without such laws we could not be free. Freedom means the right to do as one pleases only so far as the exercise of that right does not infringe upon the equal right of our neighbors. This is true economically as well as generally. It is not true freedom to permit one individual who happens to possess certain peculiar advantages to impose his will on all others. Government exists to take care of the welfare of the community, and if it should occur that the welfare of a few individuals is secured at the expense of the rest, government must intervene to protect the majority.

Experience has taught us that pure competition does not lead to the best results in solving the world problem. The system we now live under shows that there is a definite, if gradual, elimination of the element of competition and a substitution of coöperation. The coöperation is not scientifically ordered as yet, however, and it tends to show itself in the organization of laborers into trade unions for the purpose of collective bargaining, and of employers into associations tending toward monopoly.

Summary — We may sum up the description of the modern economic system by saying that it is one of modified and controlled competition. The argument may be summarized thus :

1. The wants of society are best met by leaving to the individual the complete right to produce what he will.
2. In so doing, competition will regulate the production in such a manner as to secure that all the wants of society are

attended to in the proportion which they are desired, provided, however,

3. That the competition be restrained by various modifying factors, as, for instance,

(a) The institution of private charity;

(b) The institution of governmental charity in the form of poor relief, public hospitals, etc.;

(c) The protection of the weak (particularly women and children) by governmental regulation of the conditions of working;

(d) Associations of workmen or employers for the mutual protection of interests;

(e) Government ownership and operation of industries which, from their nature are best operated as monopolies (as, for instance, the Post Office);

(f) Government control of industries which have tended to become monopolies (railroads, banks, etc.).

A fuller account of the system will be developed in the succeeding chapters.

CHAPTER IV

THE MEANING OF PRODUCTION

Physical and Conventional Necessities — In the past chapters we have spoken frequently of necessities. The word has not an absolute meaning, however; it is relative. What is a necessity to one person is not always such to another. One man's meat is another man's poison. If we are to make our study at all thorough, we must use every effort to define our terms so that there shall be no misunderstanding. In regard to the word *necessities* we may distinguish two classes. There are first those requirements which are essential to the physical life. We cannot live without food anywhere. In most climates we cannot live without clothing and shelter. In regard to all three, however, the amount and quality of each vary according to conditions. An American would starve on the diet of a peasant in India. The American regards certain articles of clothing essential which an Indian would scorn, although living in the same climatic conditions. The skin tent or the adobe hut are not adequate to the *necessities* of the white laborer.

Custom has a great deal to do with the definition of necessities. What we are accustomed to, we come to regard as being absolutely essential. What we would like to possess, but are not accustomed to, becomes luxury. For example, people managed to get to their

work by walking in the days before there were street cars. A conveyance was a luxury. Now the street car is an essential need in any city. To those who are accustomed to traveling in underground or overhead railways or in surface cars, automobiles are luxuries — even extravagances. To the professional classes and the moderately well-to-do business man, a “machine” is regarded as a necessity.

As man becomes more civilized, the number of his necessities increases, although there is no change in the physical requirements to keep him alive. We may, therefore, consider the second class of necessities as those which are conventional. That is, those requirements which have come to be regarded as necessities because those who so regard them are habituated to them, are necessities of convention or of custom only. Without them, it does not follow that the race would die out, or even the individual perish.

Characteristics of Civilization — This does not mean that such requirements are any the less necessary because they could, at a pinch, be done without. When we reach a state of civilization, that very fact is evidence that we have passed out of the stage when there was only a step between existence and death from privation. And the higher the civilization, the greater is the distance between the bare level of subsistence and the actual standard of life. This is illustrated all over the world. Wherever we find a race which we consider high in the scale of development we find a fairly high standard of living. Or, to put it in other words, the greater is the number of conventional, as distinguished from physical, necessities.

Great luxuries existing coincidently with great privations does not mean a high civilization. Because a few can satisfy every demand that their nature suggests, while the rest live in sordid poverty, there is no reason to think that there is high development. What we must regard is the general standard of life of the majority of the people. Luxuries are desirable when they can be widely shared. If they are only possible to the few at the expense of the necessities of the many, then they are to be avoided. This question of the relation between luxuries and necessities will be dealt with more fully later on. In the meantime, we are more concerned with the means of satisfying the general necessities.

Meaning of the Term *Wealth* — Our desires are satisfied either by the provision of goods or of services, or of both. Our wealth consists of the number or quantity of goods and services which we can command. In our study of economics we shall have occasion to use the term *wealth* very frequently. Like most other terms which we shall use, it is capable of many meanings. Ruskin defines wealth as that which avails towards health. This is a good definition from Ruskin's point of view. But for the purposes of scientific measurement we cannot use such a definition. For instance, an abundant supply of air and sunshine undoubtedly tends towards health; indeed it is essential to health. But it is not wealth in the sense in which we shall use the word. There is no restriction in the supply of either air or sunshine. The possession of these by one individual does not in any way restrict the satisfaction of the needs of any other. The supply

of air is illimitable. The "gentle rain from heaven" falls alike on the just and the unjust. Such forms of wealth as are free to all without restriction do not concern us. We can only deal, in our present study, with those forms which are limited in amount.

The means by which we can distinguish one form from another are simple. We need only ask ourselves the question, "Would we be willing to exchange anything for the particular form of wealth we are considering?" For instance, take the case of that form of wealth which we have just mentioned — air. Would we be willing to offer anything for the air we breathe? In ordinary circumstances we would not. We can obtain all we want without the necessity of offering anything for it. In certain circumstances it is conceivable that we would be willing to offer all we possessed for air. But those circumstances imply a restriction in the amount of available air — a situation like that of the prisoners in the Black Hole of Calcutta, for example. This only proves our contention. The same is true of water also. If we happen to live by the side of a stream of pure water to which we have easy access, we will offer nothing in exchange for water. But in a city where the water must be pumped and led through pipes and perhaps artificially cleansed, we are willing to pay a price either to a water company or to the municipality. The restriction in the supply makes for the possibility of exchanging one form of wealth for the other.

Wealth Comprises Services as well as Material Goods — Wealth in the economic sense, therefore, consists of those goods and services whose quantity

is limited. It will be noticed that the word *goods* does not stand alone. It is not only material wealth which is economic. When we are hungry we satisfy our hunger with material wealth in the form of food. When we are sick we pay for the services of a doctor. When we have trouble with our neighbors we have recourse to the services of a lawyer. If we desire to go from one city to another we make use of the services of the railroad company.

Utility, Distinguished from Usefulness — In short, whatever is necessary to satisfy our desires, whether it be in the form of some material article or of some service, the supply or availability of which is limited, we consider as economic wealth. To constitute wealth, therefore, there must be a certain quality of usefulness; the article, or whatever it be, must satisfy our want. We might say that wealth consists of those things which are useful and limited in quantity. But the word *useful* has disadvantages. We constantly use it with a certain ethical idea in our minds. To many people, for example, alcohol as a beverage is the very reverse of useful. But it does not, for that reason, cease to be economic wealth. It satisfies a desire. Whether that desire is one which ought to be satisfied is beside the point. The fact is that the desire exists and that alcohol satisfies it. And so we find it best to avoid the use of the word with the ethical implication and choose another — utility. A utility is something which satisfies a desire.

Consumption of Utilities — In the satisfaction of our desires we consume utilities. The main process of life consists of consumption, the consumption of

utilities. All our efforts are made with the idea of consumption either obviously or unconsciously. The existence of a desire presupposes the means to satisfy that desire. In consuming, we destroy. What is destroyed must be again produced for further consumption. It will seem at first glance that consumption does not necessarily produce destruction, if we have in mind the definition of utilities which was given above. We do not destroy the railroad carriage which takes us across the continent, or the street car which takes us to business. We do not destroy the doctor who eases our pain in sickness, or the lawyer who argues our case before the courts. Or at least it would appear so. But let us examine the matter a little more closely. Does the railroad carriage or the street car last forever, even if it meet with no accident? Sooner or later it is worn out and unfit for the service it has previously rendered. In other words, for the purpose it was supposed to serve it is destroyed. It has been destroyed in the course of satisfying the desires of travelers. Each traveler has contributed to that final destruction. His individual contribution is, of course, infinitesimally small, but nevertheless it has helped to destroy the street car. Each journey by each individual, therefore, consumes a portion of the possible services which that car can render. Again, in the case of the doctor, the small amount of attention that our own case involves does not seem to detract from the total amount that the doctor can give. But each doctor is capable, in his lifetime, of only a limited amount of service to mankind. Each person who accepts of that service is destroying a portion of the total

amount. He is not destroying the entire usefulness of the doctor, of course. But, then, a man is not destroying the entire loaf when he eats a piece of bread.

And so it is, also, with the lawyer. When we ask the lawyer to plead our cause before the jury, we ask for a certain amount of his time and energy which cannot be replaced; we destroy, therefore, so much of his service.

Production Determined by Consumption — It does not matter, therefore, whether we consider utilities as goods or services; in consuming them we destroy them. But in the destruction of those utilities, our desires are satisfied, and that is the end which we had in view. It is our desires which lead to the production of the means of their satisfaction. All our production is determined by our desire to consume something. This statement, again, seems to be contradictory to the facts of life. Many articles are produced which seem in themselves to bring into being the desire to consume. Advertisers are often heard to say that they create the desire to buy articles. If this be true, then the articles must have been produced before the desire existed, and it would seem that the production preceded the demand for consumption, or, in other words, that consumption was determined by production and not *vice versa*.

Let us examine their argument. Take the case of the invention of the typewriter. Before the typewriter was invented every one was content to do all his correspondence by hand. No writer worried about machines for writing. There was a definite demand for the production of the writing instruments then

known, the pen and pencil, for example. No one knew of the typewriter and hence there would appear to be no desire to "consume" one. When the typewriter was invented the inventor or the company which manufactured it had to create a wish on the part of buyers, before the machine could be sold. The typewriter was manufactured first and then gradually the public was led to see its advantages, until, at the present day, no company would attempt to carry on its correspondence without one or more machines.

Here, it would appear, is a distinct case of production determining consumption. The production appeared first and the desire to consume followed. But is this actually so? Was there ever a time when writers were perfectly satisfied with their instruments? Were they not always more or less dissatisfied with their tools? The dissatisfaction may have been more or less unconscious, but it was there. It was the inventor who realized that there was this dissatisfaction and who sought a means whereby it might be removed. In other words, if the inventor had not believed that the desire for a more perfect writing instrument existed, he would never have devoted his labor to the designing of some such instrument. If he had thought that no one would buy the typewriter when he had perfected it, he would not have invented one. The cause of his invention, therefore, was the belief that there was a latent desire to "consume" the machine which he could design. It appears therefore that the contention that consumption in this case was determined by production is only justified by superficial reasoning. Consumption had determined the production of the in-

strument and the only obscuring feature was the fact that the desire was latent and not obvious.

For a further proof of the argument that consumption determines production, we may consider the case of an invention which does not satisfy a latent demand. Suppose, for instance, some inventor produced a machine for the purpose of tying boot-laces. He might manufacture the machine in great quantities, but the sales would never justify the manufacture, because the demand for such a machine does not exist. There would be no desire to consume. In this case, which is by no means uncommon, the inventor has made a mistake in believing that there was a latent demand for his product. Hence his production is a failure. It will cease before he has manufactured many machines.

Successful inventions depend upon a correct realization of a latent or obvious desire to consume these inventions as much as upon the satisfactory working of the invention in supplying the demand. Our desires to consume articles which as yet do not exist are infinite. It rests with the discoverers and inventors to find these desires and to discover a means whereby they may be satisfied. And so we find our original view, that production is determined by consumption, to be correct.

Definition of Production — So far we have used the word *production* without defining it. It is now necessary that we make clear what it is that we mean exactly by the term. In common use there is a limitation to the meaning of the term *production* which does not exist in its economic use. An old Irish furniture

manufacturer used to say, whenever he hired a new bookkeeper, "Another non-producer on the payroll." He, in common with many other people, believed that the only actual producers were those who were concerned in the actual handling of the materials of the finished product. The bookkeeper probably never saw the goods until they were finished and ready for the market; indeed, in some instances, it would be true to say that the bookkeeper never saw the finished product at all. How then could he be called anything but a "non-producer"?

Sometimes a still more restricted meaning has been attached to the word *production*. It has been supposed that only those who are engaged in the actual extraction of the product from mother earth are the real producers. The farmer and the miner, the hunter and the fisherman, would then appear to be producers, while the miller and the steel manufacturer, the butcher and the fish dealer, were merely "distributors."

The Miner as a Producer — This contention also fails upon close examination. Let us consider the case of the miner, for example. Nature provides the mineral. The miner extracts that mineral from the earth. He does not create it. All that he does is to change its place. In the earth it is useless. There are vast mountains of iron ore in various parts of the world which are, at present, of no value. Intrinsically they are just as valuable as the iron deposits near Pittsburgh. But the fact remains that the Pittsburgh deposits are worked and the others are not. The miners have removed the deposits to a place, *i.e.*, the surface of the earth, where they may be of service.

But let us suppose that the miner leaves the ore in a dump at the mouth of the mine. Is it of any value there? Obviously it is not. If the mineral should be coal, it must be taken to some place where it can be burned and the heat-value obtained. If it is iron, it must be smelted. We must therefore add to the producers those individuals who remove the ore from the surface of the mine to the place where it can be used, or who smelt the ore to obtain the pure metal.

The Steel Manufacturer — Continuing with our example of the iron ore, we have now two classes of producers, the miners who dig the ore out of the mountain side and the smelters who obtain the pure metal. Of what value, untouched, is the pure iron? It is obviously unavailable for general use, say for the making of steel rails, or of cutlery, until it has been transformed by various processes into steel. And the steel itself must be again transformed into rails and knives, or rolled into plates, or any of the infinite variety of forms in which we desire the steel to be changed. Our true producers, therefore, consist now of the miner, the smelter, the steel manufacturer, the maker of rails, of cutlery, of steel plates, and so forth.

The "Production" of a Ship — Now go a step further. This time we will work backward. Let us consider the case of that product known as a steel ship. As a finished product it consists of the work of a great variety of trades and of a great number of different materials. Take the materials first. We shall consider only two, the steel and the wood, although of metals alone, zinc, copper, aluminum, brass, bronze, tin, and many others are used. We must have first

the ore, produced by the miner. The ore must be removed from the mine by the railroad employee. The smelter changes the ore into metal. The cast-iron pigs are then transformed into steel which is cut and rolled into many forms. It is shaped and punched again for riveting. The individual pieces are assembled by an army of other workers.

The wood is hewn in the forest, transported by river or road to the mill, where it is cut into various shapes and sizes. It is further shaped and erected by the ship carpenters. Now, it is quite unnecessary to enumerate the variety of functions performed by the trades concerned in the building of the ships. It will readily be conceded now that the steel manufacturer is as much a producer as the miner, and the shipwright as essential to production as the railroad engineer. They are, then, all producers. But what have they done to earn the title? The miner has changed the location of the ore. The smelter has changed the form of the ore. The railroad has changed the location of the materials. The shipwrights have also changed the location of the materials by erecting them into a hull.

To put it quite briefly, each of these "producers" has changed something either in form or shape or situation. He has created nothing.

Agriculture as Production — Again, take the case of the farmer; he creates nothing. Nature provides for the creation. The farmer merely assists nature in changing forms. Carbon, hydrogen, nitrogen exist already in various forms and in various groupings. The farmer assists in changing the forms and rearranging the groupings in such a way that the elements may be

finally consumed by man. The miller does not create flour. He merely changes the form of the wheat. The flour existed already in the grain. The miller extracts it from the grain and removes the husks so that the flour may be suitable for baking. The railroad conveys the flour from the place where it is of no value for consumption to the place where it can be consumed. All those who contribute in any way toward preparing the elementary substance for its final form and bringing that final form to the place where it may be consumed must be termed producers.

In no case has any material been created. What has been created at each stage of production is a new utility, a utility of form, of shape, or of place.

Production of Utilities — Now this puts a different complexion on the argument as to who is a producer. We have seen that there is no production of actual materials. But there is a production or creation of utilities. Any one, then, who contributes to the final form of consumable wealth by producing some utility is a producer.

How does this affect the old Irishman's argument that a bookkeeper is not a producer? What utility, if any, does the bookkeeper add which is necessary for the final product? If the furniture manufacturer, or any other manufacturer for that matter, desires to keep turning out his goods, he must maintain some record of the materials which pass through his hands, of the amount due to his laborers, of the amounts paid to those from whom he buys goods, and of the amounts received from those to whom he sells the goods. Without such records his manufacture would, in practice,

be impossible. The bookkeeper, therefore, in making those records is adding a utility which is absolutely necessary. He is as much a producer as any of the others. They merely produce utilities — not materials, and the bookkeeper does as much.

It matters not what industry or business is taken, the same result will be found. There is no production of materials, but a vast amount of production of utilities. And so we may say that the train dispatcher is as much a producer as the locomotive engineer or the conductor; the rate clerk as much a producer as the track layer, or the engineer who designed the system or built the bridges. They all contribute in one way or another toward the production of the final utility, a transportation system. The student can elaborate this for himself and so convince himself of the truth of the argument. But it will be advisable to carry our illustrations a little further still. In what way are we to regard our doctors, lawyers, preachers, artists, musicians, and so forth? Do they produce anything? In our opening argument it was shown that consumption consisted not of the destruction of materials only, but of utilities. These utilities comprised materials and services. Services which are not required will soon cease to be offered. If we have with us doctors and musicians and preachers, it is because these are desired. The doctors and the preachers and the others are doing no less than the farmers and the miners. They are producing utilities, and hence they are just as much entitled to the term *producer*.

Summary — We may now sum up the argument contained in this chapter as follows :

Economic wealth consists of those goods and services which are desired but the supply of which is limited. We can group both goods and services under the title of "utilities," distinguishing the term from the idea of usefulness by the elimination of all ethical interpretation.

Utilities exist or are produced for the sake of consumption. Consumption means the destruction of utilities.

The production of utilities is determined by the consumption, in spite of an appearance to the contrary. No production will be successful and continuous unless there is a desire to consume.

Just as consumption means consumption of utilities, and not merely of materials, so production means the production of utilities. In fact there is no such thing as the production of materials, in the sense of creation. Form, shape, and location of materials are changed by the creation of utilities.

Hence those individuals who assist in the creation of new utilities must be termed producers.

CHAPTER V

THE AGENTS OF PRODUCTION

From the argument in the previous chapter it will be seen that there are two essential requisites for all production. First there are material requisites, the gifts of nature; and second, there is the labor which is applied to these gifts of nature in order to make them available for consumption.

Meaning of the Word *Land*, as an Agent of Production — These two requisites are usually termed the *agents of production*. The first of the two is commonly summed up under the term *land*. It is very important to remember, however, that the word *land* is used in a sense very different from the ordinary meaning. It includes not only the dry land, but also all those other gifts of nature which furnish man with the raw material, as it were, of his necessities — air, sunshine, rain, heat, and so forth. This wide meaning given to a simple and common word will not involve us in unusual difficulties. After all, the natural forces, unsupported by the addition of directing labor, are free to all. They cannot be considered as economic wealth. And we shall, therefore, tacitly ignore all but the material meaning when we use the word. Land, then, for our purposes, will be taken to mean the earth, including its contents, in the form of minerals, etc., and water with its contents.

Meaning of Labor — The other requisite for production, labor, is equally important. Without labor very little is possible in the way of production. Indeed, if we regard the plucking of fruit from the tree as labor, we may make our statement still stronger and say that without labor no production is possible. By labor, we mean every effort put forward by man to further the satisfaction of his requirements. We are not using the word in the sense of manual effort only, as it is commonly used. We shall find, later on, that when we speak of "labor problems" we are dealing with those problems which affect manual laborers principally; but in general, when the term *labor* is used, what is meant is the more general idea of effort of mind and hand, in short, all that man does to make available for consumption the materials which nature supplies.

These two requisites, then, form the basis of our discussion of the agents of production. But labor, in itself, is subdivided into two classes. First, there is the actual labor which is exerted at any given time and to which the term *labor* is in practice restricted. And second, there is what might be termed *stored-up labor* but which is usually referred to as capital.

While it is true, to a limited extent, that capital may be considered as stored-up labor, the definition is not very satisfactory and it will be better to examine the meaning a little more closely before we attempt to give a formal definition.

Meaning of Capital — Even in comparatively primitive times, man usually possesses certain more or less elementary tools. That is, he has made instruments

not for the satisfaction that he can obtain from them directly, but because by their use he can satisfy his ultimate desires more easily or more abundantly. Let us examine a simple illustration. A man can obtain a drink of water by dipping his face in a stream, or by scooping up water in his hand. In this case his "labor" is direct. Each action brings an immediate consumption. It is easier and more satisfactory in every way to use a cup. But a cup must first be made. The labor involved in making a cup is not expended for the immediate satisfaction of some desire. It is expended for the purpose of facilitating some future labor which leads to the ultimate satisfaction of the desire. Suppose the stream runs some little distance from the dwelling of the man. Each time he wants to drink or to obtain water for any purpose he must go down to the stream, taking his cup with him. If he wishes water for cooking, he must go to the stream several times, each time bringing back with him some water in his cup. A little additional expenditure of intermediate labor will result in the making of a larger vessel, which he may fill with his cup at the stream and so save several journeys. Still further, if he spends more labor in the intermediate process, he may construct a runway or pipe leading from the higher levels upstream to the lower level of his house and so avoid all necessity to visit the stream. With each of these tools or appliances, the obtaining of water becomes easier and more satisfactory in amount.

Appliances made for the purposes of facilitating production and not for immediate consumption we may term capital. Now carry the illustration a little

further. Suppose the man decided to make a pipe. He has to expend effort first in discovering some hollow trunks of sufficient length to answer his purpose. At best the result will be only partially satisfactory. If he had an ax or a saw, he would be able to produce a much better pipe. He, therefore, spends sufficient time and energy to make an ax. With the ax he cuts down the most suitable piece of lumber and shapes it for the pipe he wishes to make. Now we have a still further example of the application of labor for intermediate purposes. The ax is made to shape the pipe. The pipe is made to lead the water. Both are produced with the idea, not of immediate satisfaction, but in order to make the ultimate satisfaction easier and more complete.

This simple illustration of elementary capital may be developed to explain the highly complex system of modern production. But instead of only one or two intermediate stages in production, there are very many. For example, take the printing trade. We already have miners who are producing steel and zinc and lead. They do not wish to use the metals themselves, as the ultimate reason for producing them. These metals are to be used for the making of printing presses and type metal. Lumbermen are felling trees, which are turned into wood pulp, and this again is turned into paper to be used in the printing presses. The final article to be consumed, and for which consumption all the preliminary processes have been carried on, is the newspaper or book. In each case the intermediate product is a form of capital. It is a form of wealth, the object of which is not the immediate satisfaction

of some desire, but the facilitating of some other production which has for its aim the ultimate satisfaction to the consumer. Wealth which is used to produce more wealth we term *capital*. Wealth which is to be consumed we may distinguish as consumer's wealth.

Capital and Consumer's Wealth — It is often, however, very difficult to distinguish between the two, as the distinction frequently depends upon the point of view. As an example, let us take the position of a man who manufactures printing presses. The steel and machinery which he uses in turning out the finished product is his capital. It is wealth which he uses to produce more wealth. His finished product, however, is ready to be consumed by the printer. From the point of view of the press manufacturer the printing press is a finished product, and consequently to be regarded as consumer's wealth. But that is not the view of the printer. He uses the press to print his newspaper or book. The latter is the finished product, the consumer's wealth. To him the printing press is capital.

Again, a real estate owner who has a number of houses which he rents is using those houses as his capital. They are wealth which is used to produce more wealth. He does not consume the houses himself. But the individual owner of a house in which he lives is using that house for the final consumption. He is getting the ultimate satisfaction out of the house, the provision of his shelter from the elements and of the home comforts which he demands. To him, the house is consumer's wealth.

The distinction between capital and consumer's

wealth, therefore, lies in the use to which the wealth is put. Wherever the particular form of wealth under consideration is used as an intermediary in the production of some other wealth, it is capital. Whenever it is regarded as satisfying a particular want, it is consumer's wealth.

Classification of Forms of Capital—The wealth which is classed as capital, however, may itself be classified into several varieties, of which we shall mention the two most important. In any manufacturing business we may note that there are two elements at least in the enumeration of capital in the balance sheet. One of these elements is the plant, which consists of the buildings and machinery; and the other is the stock of goods on hand. In a furniture factory, for example, part of the capital is represented by the buildings and by the planing, sawing, and turning machines, and so forth, which turn the wood into furniture. Another part is the wood which is used in the furniture. Now there is an essential difference between the two. The wood is the raw material of the product. Once it is turned into furniture it is in the form for final consumption. That wood can no longer be used for production. If the factory is to go on producing, there must be a fresh stock of lumber obtained. But this is not true of the machinery. The machinery can still go on turning out dining-room suites as fast as the wood is available. Throughout the whole process the planing machine, the jointer, or the saw remain the same. The wood changes from raw lumber to shaped wood and finally to furniture. There is a constant circulation of wood through the

factory, a constant stream of raw wood into the factory, and as constant a stream of furniture out of the factory.

Circulating and Fixed Capital — That portion of the capital, then, which circulates through the factory is termed *circulating capital*. In our illustration, the wood used, the materials for polishing and staining, the hinges and brass work, and so forth, are all circulating capital. That which is used over and over again, which performs the same functions until broken down or worn out, is called *fixed capital*.

In the modern organization of industry the outstanding feature is the great amount and importance of fixed capital. It is largely because of the importance of this fixed capital that we speak, sometimes, of the present organization as the capitalistic system.

The further back in history we go, the less important becomes the fixed capital in any industry. It is not so very long ago that our ancestors obtained their cloth from a hand-loom, woven from thread spun on a spinning wheel. The total cost of both instruments represented a few dollars. The modern system involves an immense expenditure in the provision of large buildings containing a vast number of spindles, other buildings with very many looms, and still others with dyeing vats, all operated by costly engines to supply the motive power. In former times manufacture was literally what the word means, the making of things by hand. Now it means the making of articles by machinery.

Division of Labor under Capitalistic System — Obviously there must be some advantages in the present system or it would never have developed. These

advantages are to be sought in the utilization of that principle which we have already stated to be one of the most important elements in economic progress — the principle of division of labor. The capitalistic system allows a very full development of that principle. In former times it was possible for a man to have the thread for his clothes spun in his own home, woven into cloth, and dyed and turned into suits of clothes without leaving the dwelling. Now some men (or women) spend all their time doing one small operation, necessary, but not always of obvious importance. One will card, or comb out the wool; another will turn the wool into rough yarn; a third will change the rough yarn into finer thread. The cloth is woven by one set of workers, dyed by another. The manufacture of the finished cloth itself is a combination of many different occupations.

This statement, however, does not explain why the multiplication of occupations is an improvement in production. The explanation consists in an elaboration of two very common sayings. One is the reference to a handyman as “a jack-of-all-trades but master of none,” and the other is the advice to “let the cobbler stick to his last.” If any individual tries to do all that is necessary for himself, he does nothing particularly well. We often hear men boasting that they built their houses themselves. As a rule they are complimented with the reservation that the house is a good one, considering the inexperience of the workman. But it is never admitted by the critics, or, indeed, suggested by the workman, that the result is as good as that produced by the professional builder. When a

man devotes his time to one occupation he usually makes a better job than if he divides his attention over many trades. His hand and eye become so trained that they work to a certain extent automatically. The amateur, on the other hand, has to work each detail of the operation consciously. Watch a small child trying to fasten a button. Each step in the operation (and a little consideration will show that there are several steps) is performed laboriously and slowly. When the child is older, the habitual performance of the same operation has brought a skill that is automatic. The individual movements which are necessary are correlated unconsciously. Each muscle automatically performs its function, and the speed is infinitely greater than at the beginning.

This is true of every operation. Habitual performance of one function, while it may have disadvantages which we shall consider in a later chapter, nevertheless results in a great increase of speed and efficiency. A combination of experts produces a much better-finished article and produces it a great deal quicker than is possible for one man performing all the operations necessary.

Hence we have arrived at the stage in our economic evolution, when we consciously try to develop new additions to our occupations, splitting up the old ones into parts, so that each operation consists of fewer movements, better coördinated, and all with the view of increasing production in quantity and in quality.

It is partly this increase in specialization which has led to the wonderful development of mechanical invention. The individual motions necessary in the

performance of a given function have been so simplified that the possibility of their performance by machinery has become more obvious.

Scientific Labor — There has even been developed a science of production which aims at the careful analysis of every function in a trade in order to eliminate waste motion. A skilled mechanic is asked to do a piece of work and a moving picture is taken of the process. Each movement of hand or arm or head is seen in the film, and wherever waste or unnecessary motion is apparent, that motion is eliminated. We shall have occasion to criticize this method of studying production later on. In the meantime, it suffices to show the immense importance and value of the division of labor.

Specialization in Location of Industry — One further consideration must be noted. Not only is there a specialization of occupation in regard to the workers, but also there is a specialization of locality. Each district tends to be occupied with some form of production for which it is peculiarly suited. The middle west is more suited to farming than to manufacture. The Pittsburgh region would be wasted if it were devoted to agriculture. This is, of course, only a broad division. In agriculture, some districts produce wheat and others, cereals; others grow cotton, others oranges and peaches. In some manufacturing districts the attention of the manufacturers is almost wholly devoted to the production of automobiles, in others to shipbuilding, and so on. The student can easily find examples to illustrate this territorial division of labor.

Industries do not group themselves haphazard.

There is always a reason for their existence in any given locality. The making of any kind of machinery depends very largely upon three or four factors. First the raw materials must either be present or readily available. Then the motive power must be there, either in the form of coal within a short distance, or else of electric power. There must be a sufficient supply of labor of the right kind. And there must also be ready access to the market for the product. Historical considerations also have their bearing upon the location of industry. Sheffield cutlery, for example, is famous all over the world. But Sheffield has not now what would be regarded as exceptional facilities for the production of high-grade cutlery. Originally the industry was located at Sheffield because of the presence of a certain kind of stone, known as Sheffield grit, which was peculiarly suitable for grinding. Iron ore was also close at hand. Now the cutlery is made from Swedish ore and is ground with carborundum, an artificial product. The associations of the past have kept up the industry in the present. It must always be remembered, however, that historical associations will not suffice in themselves to keep an industry in a certain location. In former times iron smelting always took place near a forest, for the ore was smelted with charcoal. Now it is situated where coal, not wood, is available. The economic conditions must always be suitable. But given fairly satisfactory economic conditions, historic associations will keep an industry alive, even though the industry would not be attracted there because of peculiar advantages.

CHAPTER VI

THE LAWS OF PRODUCTION

Much stress has been laid in previous chapters on the importance of the principle of division of labor. The whole object of this division, as has already been seen, is to make production easier and more economical. That is, we have secured, in this principle, a means of producing much more rapidly and, very frequently, much better, those things which we conceive to be necessary for our existence. Now the fact that we are living in an age of specialization necessarily means that there must be a great deal of exchange of surpluses. Each produces more of a given kind of wealth than he needs for his own consumption, and exchanges the surplus for other kinds of wealth produced by his neighbors.

Production Stimulated by Profits — Obviously each will attempt to exchange his surplus to the best advantage; he will try to gain as much by his exchanges as possible. The more he obtains by exchanging the surplus of his own product the greater will be his satisfaction in that production. The less he is able to obtain by such exchanges, the less will be his desire to continue producing that particular article. If, for example, a man finds that by producing furniture he can exchange his surplus for all the other products that

he requires, he is satisfied and goes on manufacturing furniture. But if he finds that every one has already sufficient furniture and that consequently he is not able to exchange his surplus for more than a small fraction of his other needs, then he will cease to continue the business and will seek some other article to produce which is more in demand.

His production, therefore, will depend to a large extent upon the amount of wealth that he can gain by exchange of surplus. This, of course, is not the only reason for his production. There are many others. He may be satisfied with a small return for his effort if, for example, the actual production itself gives him a great deal of pleasure. An artist will often keep on painting pictures although he could gain much more by drawing posters for advertising firms. But these other reasons for production will occupy our attention in a later chapter. In the meantime we can safely regard the desire to exchange wealth produced by the individual for other kinds of wealth produced by other workers as the main stimulus to production.

Production Secured through Application of Capital and Labor to Natural Resources — Now all production is secured by the application of two of the agents which we discussed in the last chapter to the third. Capital and labor are applied to natural resources, and the result is the creation of utilities in a form ready for immediate or ultimate consumption. The furniture manufacturer applies his capital and the labor of his workmen and himself to the wood and other materials which are provided by nature, and the result is shown in tables and chairs and so forth, all ready to

be used by purchasers. The farmer applies his capital, in the form of various kinds of agricultural machinery, barns, dairies, etc., and the labor of his men, to the land. The result is the production of food for the people.

Neither the farmer nor the manufacturer is in the business "for his health." Each calculates with greater or less accuracy the return which he will obtain for his expenditure of time and capital. And each, in his way, will try so to use that capital and labor as to obtain the greatest return.

Necessity for a Certain Minimum Capital and Effects of Increases — Neither, however, will attempt to commence production without a certain minimum of capital. If the farmer starts on a large farm without sufficient capital, he soon finds that his production is too expensive. The returns are not sufficient to justify what expenditure he has made. In other words, he finds he is working at a loss. His natural remedy is to find more capital. We are not concerned here as to his methods of finding the additional capital. Find it he must, however. And when he has found more capital and applied it and the result justifies his efforts, he immediately wonders whether greater results can be obtained by the use of a little more capital or by the employment of a few more laborers. The additional expense of irrigating a certain field, for example, may be more than offset by the increased production from that field. An extra hand to help in the plowing of another field may mean a larger harvest. Of course the irrigating of the field or the employment of the laborer will mean more expense. But if the returns due to that additional expense are considerably

greater than the actual expense itself, then the procedure is justified.

Let us take a concrete instance. Suppose a farmer has been in the habit of using horses for his plowing. With the number of animals he possesses he is able to cultivate one half of his land, using the rest for pasture. By the addition or substitution of motors he believes he could cultivate three quarters of the land. The point that he must decide is this. Will the additional crop from the extra quarter be of sufficient value to pay for the expense of buying and operating the motor plows? If so, then he is justified in considering the purchase. But it is doubtful whether he would actually purchase the motors if he thought that the result would only be sufficient to pay for, and operate, the plows. There must be an increased profit to make the actual purchase worth while. If by the use of his existing means of production he is able to gain an income of say \$3000 in a year, and the substitution or addition of motor plows will produce an income of \$3500 and also pay the annual proportion of expense of purchasing and maintaining the motors, then obviously the motors should be bought.

Again, if he is considering the employment of more laborers, he must estimate the amount of additional profit which would result from the addition to his pay roll. If that amount is greater than the pay of the laborers, then, naturally, it pays him to hire the men. If the new profit is only sufficient to pay the wages of the new laborers, he is not justified in hiring them.

The "Dose" of Capital and Labor — Still further, it may not be a case of simply a few more laborers, or

some machinery. It is quite possible that both are necessary. It is usually the combination of the two which must be considered. We can simplify our argument, then, by taking some hypothetical addition of both capital and labor combined, which we may call a *dose of capital and labor*. We must remember, of course, that the idea is arbitrary. There is no such thing as a uniform application, but the conception is useful for the purpose of argument.

In commencing any production, then, a certain number of doses of capital and labor are essential before the production can be profitable. With one dose the return would not be sufficient to bring any profit. A farmer might conceivably start farming with one horse and one plow and the labor of his own hands. But he would not make much of a success of the farm. The minimum number of doses to be applied must be sufficient to bring what may be termed the *normal profit*. That is, it must be sufficient to bring as much profit as its employment in any other industry would bring, on the average. To make this quite clear let us again consider a concrete example. Suppose, by the application of a given number of doses of capital and labor, an income of \$3000 a year can be obtained in many different industries — farming, manufacturing, *et cetera*. Then we may consider that the normal return from that number of doses is \$3000. Now if the application of a further equal number of doses only brings an additional \$3000, then the addition has only secured the normal profit. But if this additional application produces a return of, say, \$4000, it is quite obviously well worth applying.

Each individual farmer or manufacturer must consider for himself when the application of additional doses of capital and labor will produce an increase over the normal return. There are times when it will and other times when it will not, and the occasions will vary from industry to industry.

Let us continue our illustration of the farmer's occupation. The farmer commences with the minimum necessary to secure the normal return. Anything less would prevent him from continuing farming. Almost invariably he finds that an additional dose brings a more than proportionate increase in returns. A further dose again brings in additional proportionate increase and so on, until a time arrives when the extra increase over the normal produced by one more dose of capital and labor does not amount to as much as that produced by the previous dose, and with each additional dose the return above the normal rate falls until at last a time is reached when the addition of one more dose only produces the bare normal return.

Law of Increasing Returns—When that time is reached, it is time to stop applying any more capital and labor to that farm. When it is found in any particular industry that an additional dose of capital and labor produces a more than proportionate increase in return, that industry is said to be subject to *the law of increasing returns*, or *increasing productivity*.

So far we have considered the matter from the point of view of the farming industry. This is not, however, the best illustration of the action of the law of increasing returns. Most farms in a highly organized community have ceased to be subject to that law.

The normal profit from farming is that represented by those farms which are using the most satisfactory amount of labor and capital. In the manufacturing industries, however, the law is better exemplified. Many small factories are at work and continuing production with a fair degree of satisfaction, although an increased amount of capital and an addition to the number of workmen would produce a proportionately greater profit. Every one has heard, at one time or another, complaints of small manufacturers, and even of larger ones, that they are working at a disadvantage from lack of capital. This is only one way of stating that their industries are subject to the law of increasing returns. The manufacturers imply that if they had more capital, or could obtain more laborers, their profits would more than justify the additional expense.

Illustration from Ship-building Industry — At the present time a very good example is found in the ship-building industry. The demand for ships is very much greater than the supply. Plant after plant is hampered in its production by the fact that it has to wait for the production of machinery — steel punches, drill presses, shearing machines, and so forth. All these represent capital. If they were able to obtain these machines more rapidly, their production would be increased to such an extent that the profits reaped would very much more than offset the cost of the additional machinery. The same is true in respect of labor. The supply is not nearly so great as the demand. Many more workmen could be employed and the profits from their labor would be much more than proportionate to the wages paid to them.

Law of Diminishing Returns — But even in manufacture there comes a time when the law of increasing returns ceases to operate. As the demand for ships, for example, is satisfied, there will be less need for the production of new ships. The prices for tonnage will fall and profits will fall with them. Hence the provision of more capital and labor will be less and less desirable. Finally it will be undesirable, in that the cost of the additional doses will be greater than the returns from those doses. In other words, a time comes when the reverse law, *the law of diminishing returns*, operates.

Sooner or later in all industries the law of diminishing returns comes into play. In fact, it may be said that the operation of the law of increasing returns represents a temporary condition only. It works up to a certain point and when that point is reached the law of diminishing returns takes its place. This latter law, stated simply, means that with each additional dose of capital and labor applied to an industry, the return is less. This use of the word *return*, however, must not be understood to mean the money reward for the production. It means rather that the net amount produced is less. For this reason, the law is sometimes called *the law of diminishing productivity*.

In the case of a farm, for example, if the return from one dose of capital and labor represents one hundred bushels of wheat and an additional dose only secures a return of ninety bushels, then the law of diminishing returns is in operation, whereas, if the new return had been one hundred and ten bushels, then the other law, of increasing returns, would be indicated.

The law of diminishing returns begins to operate long before the point of normal returns is reached. In the foregoing example, for instance, it may be supposed that a return of fifty bushels for one dose of capital and labor would be sufficient to justify the farmer continuing his business. If that were the case he would not cease to add doses of labor although the return to each dose was less with each addition. As long as the return was more than fifty bushels he would be willing to add dose after dose. But in time there would come an additional dose the return for which would only be forty-nine bushels. At that stage there would be no profit on the increased use of labor and capital, and hence there would be a definite cessation of increases.

Graphic Illustration — Perhaps the whole question can be made more distinct by a visual illustration.

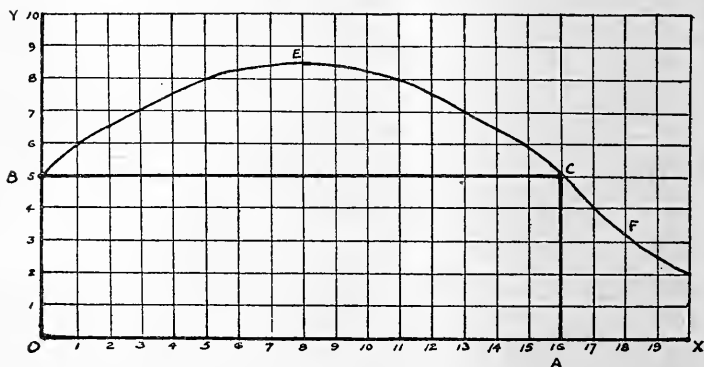


FIG. 1.

*CURVE TO ILLUSTRATE THE LAWS OF INCREASING
AND DIMINISHING RETURNS.*

The application of the laws of increasing and diminishing returns may be illustrated by means of a curve. Figure 1 represents such a curve. Along the line OX each division represents one dose of capital and labor. Along the line OY each division indicates, let us say, ten bushels of wheat. Let us assume that production commences with sufficient capital barely to justify its application, and that the return is fifty bushels of wheat. Along OY we mark the point B which is five spaces from O . This represents fifty bushels of wheat. The first additional dose, let us say, brings a return of sixty bushels. From the first division along OX we count up six spaces and then mark a point. Now suppose that the returns for each of the doses of capital and labor run as follows: 65, 70, 75, 80, 82, 84, 85, 84, 82, 80, 75, 70, 65, 60, 50, 43, 35, 30, 28. In the same way as before we mark a point for each additional dose indicating the return from that dose. Then we join the points and obtain the "curve" $BECF$.

This curve represents both the law of increasing returns and the law of diminishing returns. The highest point reached is that which represents the returns for the eighth dose. From that time onward each dose brings in a less return than the previous one and so, obviously, the law of diminishing returns is in operation. The curve up to the point E , therefore, represents the operation of the law of increasing returns and from E onward the law of diminishing returns.

We have assumed, however, that production is justified as long as there is a return of fifty bushels from each dose of labor. From the point B , which represents a production of fifty bushels, we draw a

horizontal line *BC* until it reaches the curve at the point *C*. This line represents the line of normal returns. Any dose of capital and labor is justified whose production reaches this line. Hence the total actual production will be represented by the area included in the figure *OBECA*. There will be no further production after the sixteenth dose, because the return from the seventeenth is less than fifty bushels.

The object of all systems of production should naturally be to secure such an application of the available capital and labor that all industries have reached the condition represented by the point *E* on the diagram. That is the point where the capital and labor have been utilized to the highest advantage. Wherever the law of increasing returns is in operation there will be a struggle to increase the amount of labor and capital applied to the industry so that the utmost production can be secured from the effort applied.

Effect of the Operation of the Laws of Increasing and Diminishing Returns — Whenever in any given industry the point is reached where the law of diminishing returns has been in operation long enough for the returns to drop to the minimum required for normal profits, then there will be a tendency to divert capital and labor from that industry toward some other where either the law of increasing returns is in actual operation, or where the law of diminishing returns has not progressed to the point of normal minimum returns.

In the following chapter we shall discuss some of the methods of industrial organization which have been instituted with the idea of making the most economic use of capital and labor.

CHAPTER VII

THE ORGANIZATION OF PRODUCTION

From a certain point of view the heading of this chapter gives a somewhat wrong impression. Production in our modern world is hardly organized at all; it is rather haphazard. But even as we have seen that there are underlying laws which give a sense of unity to the competitive system, so we may see certain rules at work which, while they do not amount to a definite organization, nevertheless show that there is a certain method at least, which takes something from the haphazard appearance.

Distinction between Business and Industry — In a former chapter it was shown that production consisted in altering the form, the shape, or the position of wealth or in the creation of services. Production may, however, be roughly divided into two classes. There is that form of production which consists very largely in the altering of the form and shape of material wealth, and there is the other kind which consists in the distributing of the wealth. The common terms, *Industry* and *Business*, serve to designate the two classes with sufficient accuracy for our purpose. Industry is related principally to manufacturing and mining, although for the purpose of this rough classification we may also include agriculture. Business is concerned

with the exchanging of goods. It is not commonly considered as being production, but in the sense in which we have defined the term it is as much so as any other form of economic activity. Business produces utilities, and that is all that is done by the industries.

The further back one moves into the historic past, the more hazy becomes the distinction between the two classes. Primitive business and manufacture were conducted by one and the same individual. The arrow maker made his arrows and also attended to the exchange of his product for that of the hunter. But the further one moves from primitive methods, the more does the principle of division of labor operate. Specialization in the methods of exchange increases as rapidly as specialization in the realm of industry.

Early Trade — There is much that is interesting in the history of the development of the merchant class and of its methods. The early chapman or peddler was a familiar figure in the times when Alfred the Great ruled over the Saxon kingdoms in England, and Charlemagne built up his great empire. The wandering merchants from far-off countries were either eagerly welcomed or driven off with suspicious hate, according to the development of civilization in the lands which they visited.

Merchant Fleets — Essentially, however, in all those early examples of business activity, we find merchants working almost entirely upon their own capital. They bought the goods which they sold. There was no commission business done. Hence the amount of business done by one particular firm or merchant was

usually small. In order to cope with larger business, partnerships were necessary and they developed in their own fashion. Merchant trading, especially in oversea traffic, was a hazardous occupation. The seas of Europe swarmed with pirates. The single vessel owned and often commanded by the merchant whose goods it contained, was seldom a match for the swift galleys of the pirates. For the sake of protection the individual voyage gave place to the voyage of the merchant fleet. At regular periods the Venetian or Genoese fleets left their home ports in the Mediterranean to sail to the Levant or along the western coasts of Europe. But it must be remembered that these fleets consisted not of one individual venture. They were a unit only in the fact that the ships sailed together. Each ship was a separate enterprise. It is true, of course, that as trade grew, more than one merchant was associated with the venture in a particular ship.

Formation of Partnerships and Companies — Temporary partnerships were arranged where the fortune of one merchant was not sufficient to fit out a whole ship. And later on as the partnerships grew in size perhaps several vessels were required to carry the goods of the partners. Still later, it was found that more could be done by the combined efforts of large groups of merchants whose interests lay in one particular trade than by the individuals who composed the groups. Companies were formed whose objects were to secure treaties from foreign governments and to provide means of securing just payments for goods sold in the lands which the fleets visited.

Indeed at the ports of call the companies had their own "factories" which were not factories at all in the modern meaning of the word. They were rather storehouses and trading stations. Naturally the group of merchants who formed the companies had to have some form of organization. Rules were designed to prevent unfair competition between the members. Prices were standardized. The facilities obtained by the companies were to be used freely by all members who obeyed the rules and contributed to the expense of operation. This latter consideration of expense was important. The medieval dukes and barons and kings who granted privileges to the merchant companies seldom did so merely out of a wish to foster industry and commerce. They desired some cash payment, and the cash had to be forthcoming from the companies themselves. And having obtained their concessions, the companies were at pains to keep outsiders from profiting.

Monopolies and Regulated Companies — They attempted to secure monopolies of the trade from their own governments, and thus arose the system of regulated companies. In return for a consideration the ruler of a country granted a monopoly of a certain trade to a company whose rules were more or less subject to the approval of the government. All other merchants of the country were forbidden to take part in the trade. As an illustration of these companies, there may be cited the Levant Company, which received a charter from the English king to trade in the spices and silks of Palestine and the East; the Muscovite Company, which had a monopoly of the trade

to Russia; the Merchant Adventurers, who traded with the European countries bounding the North Sea, and so forth.

In none of these did the company as a whole do any trading. The merchants who were members of the company traded individually and were only associated together in order to secure the advantages of the monopolies granted to the company and of the treaty arrangements which it secured.

The Chartered Companies — Perhaps the whole system may be better explained by taking an example of later date than those companies mentioned. The East India Company obtained a "charter" from James the First to trade with the peoples of the east coast of India. The company established "factories" at Madras and later on at Calcutta and Bombay. It arranged for protection and freedom to trade with the Indian princes and rulers, and bought sufficient land on which to erect its warehouses. The merchants who composed the company did an independent trade. Partnerships were common, but temporary. That is to say, each ship was an individual venture. Partnerships would be formed between a small group of merchants to fit out a ship to sail to the Indies. When the voyage was over the profits were divided and the partnership ceased. Naturally there was a tendency for successful partnerships to be renewed and from this tendency arose the joint stock company. Before this can be discussed, however, it will be well to consider the advantages and defects of the simple partnership.

Advantages and Defects of Partnerships — Partnerships are by no means extinct. They exist in great

numbers to-day. But they only exist, with perhaps a few exceptions, in connection with small businesses. Most of modern business is done by large concerns whose capital is too great for the simple partnership to command. The partnership arises, however, from the fact that the average individual possesses insufficient capital to carry on a business successfully himself. He combines his capital with that of his partner and so is able to undertake enterprises which each separately could not finance.

Obviously there is a distinct advantage, not only to the partnership, but to the community, in this arrangement. It means better and more economical use of capital. New industries become possible and old ones are improved. We shall notice some of the reasons for such improvement in the next chapter. At present it is sufficient to realize that the principal advantage resultant from the combination of two or more merchants is the possibility of widening the scope of operations and increasing their efficiency.

Partnerships, however, have distinct disadvantages. In the first place, they are naturally temporary. They may be dissolved at will or at the death of one of the partners. It has frequently happened that a good business has been ruined through the death of one of the partners and the withdrawal of his capital by the heirs of the dead man. Again, as far as the partners are concerned all is well, perhaps, as long as the business is successful. But in times of failure it may mean a great deal to one or both. For example, under the laws which control simple partnerships, the partners are each responsible for the debts of the company to

the full extent of their individual resources. If one of the partners is a wealthy man with but a small portion of his wealth in the partnership capital, while the other has all his capital invested in the one business, on the failure of the business the rich partner may find that the whole of the rest of his wealth is drawn upon to pay for the debts of the company which has only been using a small portion of his capital. To put the matter in concrete figures, let us suppose that two partners engage in a business. One of them supplies \$5000, which is all the funds he possesses. The other also supplies \$5000, but has additional property worth \$50,000. If the company fails and the debts amount to \$20,000, then the richer of the two partners must pay out of his own funds the \$10,000 necessary to fulfill the obligations.

Now this will prevent and has prevented the formation of many partnerships of people with small capital. A man will not invest his savings in a business when he knows that he may be called upon to sell his home to pay the debts of the company, in case of failure. Hence partnerships are usually confined to those who are able to take an active share in the operations of the business and whose capitals are more or less equal.

Early Joint-stock Companies — The joint-stock company, as it used to be, was simply an extended partnership. Many men combined portions of their individual capital to form a company. The company was directed by certain of the subscribers, the total number being too great to take a direct share. Hence the whole of the fortunes of the individual investors were dependent upon the business ability and success of those who

directed the work. If this was sufficient, then all was quite satisfactory. But if the directors were not skillful, then it might easily happen that the subscribers had to pay for that lack of skill.

Limited Liability — The remedy for this grave defect has been found in the principle of limited liability. Under modern corporation laws in all countries the subscriber of capital toward the formation and operation of a company is limited in his liability to the amount of capital which he has subscribed. If a man buys a share valued at a hundred dollars, it is possible that he will lose all that he has paid for it. But he need not lose any more. Should the company which has received his hundred dollars fail, the hundred dollars will probably be lost either entirely or in part, but there is nothing to require the subscriber to sell any other property to make good the debts of the company. In banks the law insists upon the principle of double liability. That is, the subscriber to the capital of the bank may be called upon, in case of the bank's failure, to pay an additional amount equal to his original subscription. This does not affect the principle of the system, however.

The value of the idea of limited liability rests upon the fact that a man with a small capital may use that capital by lending it to a company, knowing that his possible loss is restricted to the amount he invested.

As a natural result from the development of the use of this principle, the joint-stock companies have grown to such an extent that they are now the commonest form of commercial and industrial organization. They have very distinct advantages over the system of

private partnership. Apart altogether from the advantage in the matter of liability which has already been mentioned, there is the great improvement in the life of the institution. The corporation cannot suffer from the withdrawal of a partner. A partner, *i.e.*, a shareholder, cannot withdraw from the business unless he provides some one to take his place. The personality of the new partner, moreover, is immaterial. The stockholder who wishes to leave a company must sell his stock. The purchaser becomes the new partner in the business, but the policy and directorate of the corporation remain unchanged. Only in the case of the purchase of such a large block of stock as to give the new shareholder a decisive voice in the management of the company may the policy and directorate be changed. It is assumed, however, that the greater the amount of capital subscribed by a shareholder, the greater will be his interest in the success of the company. And so, if the shareholder acquires what is called a controlling interest, the probability is that he will manage the business, to the best of his ability, in the way which will bring the largest returns to himself and, presumably also, to the other stockholders.

Theoretically, a corporation never dies. The individual shareholders do, of course, die, but their place is taken by others to whom their stock is left or sold, and so the company goes on doing business. Again, the laws require always a certain minimum number of directors who are technically responsible to the stockholders for the conduct of the business. In the multitude of counsel there is wisdom. It is assumed that the inexperience of one director will be nullified

by the experience or skill of the others. On the whole it may be safely assumed that the corporation is usually more efficiently managed than the private partnership.

Government of the Modern Corporation — The development of the corporation form of business is in line with the general development of democratic institutions. There is a distinct analogy between the government of a corporation and the government of a democratic country. The individual stockholders correspond to the individual voters. The Board of Directors is similar to Congress, and the Chairman, to the President. The Manager, Secretary, and Treasurer correspond to the Cabinet officers. Just as the voters elect Congress and the President, so do the stockholders elect the Board of Directors.

Bond Issues and Bondholders — In modern times, however, there are other ways in which a corporation can obtain capital than by securing stockholders. They may borrow directly from the public. Of course, it is true that the corporation borrows money from the public when it issues a prospectus and obtains subscriptions to its capital. But the subscribers become direct partners in the institution, sharing its losses as well as its profits. If the corporation issues bonds, however, the bondholders assume no responsibility for the losses of the corporation. They simply lend their capital for a definite rate of interest for a given length of time. As they do not share in the losses of the business, they do not share in its management. The management lies with the partners, that is, with the stockholders. As long as the bondholders receive their interest and the principal of their loan is not

endangered, they have absolutely no say in the working of the corporation. They are exactly in the position of mortgagees who have lent money on the security of real estate. The mortgagee is not concerned with the way in which his money is used. He is satisfied so long as the interest on his money is paid regularly and the property upon which the money is lent is efficiently safeguarded.

Of course if the interest is defaulted, or if the property is obviously being depreciated so that the ultimate security of the money lent on the bonds is endangered, the bondholders may step in and, upon due legal process, assume control of the business. It has sometimes happened, indeed, that bondholders have, by various methods, secured a great apparent depreciation of the assets of a corporation, and assumed control of a corporation, ultimately buying the assets of the company at public sale for a very small sum. No system has been invented so far, however, which is proof against unethical forms of manipulation in the interests of individuals.

Profits of Bond- and Stockholders — It would appear from the above account, that the bondholders are in a much better position than the stockholders. Their principal is secured as well as their interest. Their interest, however, is limited to the stipulated rate, while the profits of the stockholders are limited only by the earnings of the corporation. In return for the risk of loss, the stockholder gains the possibility of higher returns upon his investment.

Improvements in Production Due to Corporation Form of Organization — The great advantage which results from the growth of the corporation form of

organization is the possibility of working in large units. It is not unvaryingly true that the larger the unit the better the organization. It will be noted in the next chapter that the law of diminishing returns operates in the organization of corporations as well as anywhere else. Nevertheless, the older organization was so uneconomical that there has been great scope for the working of the reverse law of increasing returns. The older system meant the existence of innumerable small organizations with the attendant waste and duplication of effort which characterized them. To a very large extent this waste can be eliminated. It has not been entirely removed as yet. No one with any real knowledge of the working of our modern organization will refuse to acknowledge the enormous amount of waste of effort and of material which goes on. There is more talk than actual realization of efficiency. Still, there is undoubtedly an improvement. The larger units have eliminated a great deal of the waste. To take one instance alone, it may be shown that our modern banking system, working in large units, closely interrelated with one another, is infinitely more efficient than the older system of a vast number of private banks.

Illustration from Banking Business — The early history of banking in the United States shows the existence of a great number of small banking houses frequently working with an unduly small capital. In fact there are instances of men starting banks without capital at all other than the amount necessary to rent a room. In order to make profits, risks which were far from good had to be taken. Rates of interest too

high to allow conservative business men to avail themselves of loans had to be charged. The natural results were comparative lack of assistance to good businesses, and overconfident financing of speculative enterprises. Failures were common. The credit of the country rested upon a wrong basis. Under the modern system a much more satisfactory state of affairs is apparent. The speculative side of industry is not supported by the banks to the same extent, but larger banking resources are open for the prosecution of legitimate commercial enterprises.

The detail of these banking systems will come up for discussion later. At present, the system is used merely as an illustration of the improvement due to the corporation system.

Department and Chain Stores — The development of the great department stores and the "chains" of stores is another illustration of the elimination of waste and the securing of economies through the corporation system. Large capitals are necessary to these organizations. And large capitals cannot be obtained, except under very exceptional conditions, from a few individuals. Hence they must be the result of the accumulation of small investments which is the essential character of the corporation capital. Even in the great department stores there is waste, only too evident to those who manage them. But the waste there is infinitesimal when compared with what prevails in the small stores. Small stores buy their goods at a disadvantage. They must take small quantities at a time, and must consequently pay the high prices inevitably charged for small amounts. They are not

in a good position to judge of markets. Their own market is confined to a small radius and there is consequently little possibility of goods not wanted in one locality being disposed of by selling them in another. The department store reaches a much wider market and can afford to buy in much greater quantities with the certainty of being able to dispose of a much greater variety of goods than can the small dealer. The varying wants of wider markets can be satisfied with less waste.

The village tailor can only have a small range of material for his customers to choose from. If he has a wide range, he will probably find that much of his stock remains on his shelves. Hence his customers cannot satisfy themselves readily. They will prefer to deal with the city store which has variety to satisfy all tastes and which can nevertheless turn over its stock much faster than the village tailor can hope to do. No further illustrations are necessary. Common observation will furnish infinite numbers to prove the truth of the contention that the large capital usually means greater efficiency.

CHAPTER VIII

THE ORGANIZATION OF PRODUCTION (continued)

It is not only in business that great strides have been made during the past century. The industrial world has moved too, and, indeed, shows even more difference from the crude methods of the past than does the business world. Space does not permit of an exhaustive account of the new developments, but the principles upon which the present organization is based can be indicated without occupying too much of our attention.

Agriculture as Industry — As was suggested in the last chapter, it is advisable to consider agriculture as a branch of industry. There is really no essential difference between agriculture and manufacture. The agriculturist merely applies his skill and knowledge to the changing of the chemical constituents of the soil into food and the raw material of fabrics. The farmer's aim as an agriculturist, apart from the primary necessity to obtain profits, is to produce from the soil the greatest quantity and best quality of crop that can be obtained. He should always strive to improve his production in both directions, and his success may be illustrated by reference to the methods and results of past systems.

Primitive Agriculture — Primitive agriculture consisted of a simple scratching of the almost virgin soil

and allowing the processes of nature to work with little assistance from the farmer. Even as late as the seventeenth century, the highlander plowed the mountain sides in Scotland by means of a primitive implement tied to the end of the ox's tail. The actual origins of agriculture are doubtful. Probably man learned very gradually that the growth of the wild crops could be stimulated by simple tilling of the soil, exposing to the sun fresh earth. With this as a basis, and with very little knowledge of the effects of cropping upon the constituents of the soil, his knowledge was increased by experience when he found that continual cropping with the same cereal impoverished the soil. Various methods were adopted to prevent this impoverishment. Possibly, as the farmer wandered from exhausted fields to virgin soil he arrived in his wanderings at last at a field which had already been tilled and left upon its exhaustion. He discovered that in the interval during which the land had lain idle it had regained its fertility, and thus arose the knowledge of the value of letting land lie fallow. Every one is familiar with the biblical method of allowing one year in seven to the soil in which to recover its resources. The method adopted in the northern parts of Europe from which our ancestors came was somewhat different. There the cultivated lands were divided into three parts, two of which were tilled each year while one remained fallow. Each of the "fields" had its turn of fallow once every three years.

Communal Tillage — The lands were tilled in common, although not necessarily communally owned. Each of the cultivated fields was divided into strips,

separated from one another by "balks" of grass — strips of grass from four to six feet wide. Each of the cultivators possessed the produce recovered from one or more of the strips. When the crops had been reaped and the cattle fed upon the stubble, the time came for the re-cultivation of the field. The strips were divided among the cultivators again, although it did not follow that each would receive the same strips whose produce was his property in the previous year.

This three-field system was a distinct improvement over the old system of continuous cropping to the point of exhaustion, but it was nevertheless wasteful. Moreover, the communal method of operating the land made it almost impossible to conduct experiments for improving the crops.

Difficulties in the Way of Progress — There is a general feeling that farmers are a conservative class, hating innovations. That may not be true at present, particularly in America, but it undoubtedly was so in the past. And when there came a farmer sufficiently radical to suggest a new method, he found it almost impossible to persuade his fellow cultivators to agree to the "new-fangled" idea. Progress was only possible when experiments were made upon land which was not included in the three-field system. In England the system broke down during the eighteenth century. The individual farms were "inclosed." That is, each of the cultivators became the possessor of an amount of land roughly equivalent to the area whose produce he had formerly received. Then the individual could experiment for himself, if he so wished, without consulting the opinions of other farmers. It was during

this period that what was known as Dutch culture was inaugurated. In other words, continuous cropping with one crop gave place to a rotation of crops, it having been found that what one crop took from the soil was replaced by another.

The experiments of some cattle breeders at the same time improved the breed of cattle to an extent which seemed almost miraculous. This was made possible by the utilization of root crops for winter feed.

Extensive Culture in America — The greatest strides in farming methods, however, occurred in the American continent. Here was a land in which virgin soil seemed almost inexhaustible. Careful tilling was not, at first, necessary. The size of the farms was infinitely greater than in Europe, where for centuries almost every available acre had been tilled. When a larger crop was required, instead of manuring the existing farm land, fresh virgin soil was plowed and sown. The wide area of land under tillage and the comparative scarcity of labor tended to encourage the use of labor-saving machinery, and to-day America is preëminently the land of machine farming. Virgin soil no longer exists in unlimited acres. Careful cropping is necessary, and the wide areas cultivated must employ the best of the machines in order to provide food not only for the cultivators themselves, but also for the peoples of the old world, who have come to depend very largely upon the produce of America for their daily food.

For a comparatively long period, American farms worked under the law of increasing returns. Intensive culture in Europe had shown that land could be improved in quality and greater crops secured by the

artificial supply of chemicals which were lacking in the soil. But Europe had reached the stage where the law of diminishing returns was in operation, and although the powers of the soil were improved each addition to the crops cost a proportionately greater expenditure of labor and capital. America learned from the experience of Europe, and vast changes have been made in the methods of agriculture. Farmers have at their service the best knowledge of the government experts, and the universities have devoted much attention to improving methods and to eliminating the drawbacks to successful cultivation.

Increased Use of Fixed Capital—The essential change in our methods of agriculture, however, is due ultimately to the increased amount of fixed capital. The simple plow drawn by horse or ox has given place to the steam or gasoline tractor drawing many plows. Seeding, harrowing, reaping, binding, and threshing are all done by machinery, and done more economically and with better results than formerly.

The use of machinery, while it has proved infinitely more satisfactory than hand labor, has not diminished the number of people engaged in farming. On the contrary it has increased the number dependent upon agriculture for their living to an enormous extent. It is true, however, that this increase, big as it is in actual numbers, is not proportionate to the increase in population. Irrigation, involving an immense expenditure of capital and labor, has brought into cultivation areas which used to be deserts. The needs of a growing manufacturing community have demanded an increase in production which has made it profitable to apply a

new army of agriculturists, armed with the best weapons of the modern scientific farmer, to the cultivation of all available soil. The new methods have lightened the lot of the farmer, and the increased means of communication, necessary for the removal of his produce, have brought him into closer touch with his neighbors, and stimulated him mentally.

Manufactures. Subordinate Nature of Early Manufacture — Although agriculture has made great strides it is in the manufacturing side of industry that the greatest changes are to be seen. Formerly all manufacture was carried on merely as an adjunct to agriculture. Agriculture was the mainstay, and a limited amount of specialization allowed of the existence of trades unconnected with farming. The smith and the carpenter did not devote any of their time to farming, or, at least, devoted very little; but the spinning and weaving of cloth were carried on by the farmers themselves. Manufacture then meant what the word really signifies, the making of things by hand. The spinning wheels and the hand looms were hand made. They were operated by hand in the houses of the working people. Industry was domestic, but it was not without its organization.

The Gild System — When specialization of occupation grew to such an extent that trades developed beyond the simple blacksmithing and carpentering; when the butcher and the baker developed their crafts and the gold- and silversmiths arose, each craft attempted to secure the welfare of those who carried on those industries. They united in organizations which were termed *gilds*. The gilds were bodies which

comprised all who were engaged in a particular craft, or trade. They were organized under definite rules which provided for all the necessities of the trade. Before a workman could be admitted, he had to pass through a period of apprenticeship, during which he lived with his employer. The employer undertook to teach him the craft and to clothe and feed him while he learned. At the end of his apprenticeship he became a journeyman and looked forward to the time when he could begin business himself as a master. The gild included those in all three stages — apprentices, journeymen, and masters. Rules prevented one master from obtaining more than his share of the amount of work to be done; the manner of the work done was criticized by the officers of the gild in order to maintain good standards of workmanship. Competition was not allowed.

The sick and infirm among its members were cared for by the gild funds, from which also the orphans and widows of deceased members were aided.

The gilds broke down very largely because of an ever growing strictness in the rules for admittance. No one was allowed to practice a craft who did not belong to the gild in his district. He could only be admitted to the gild as an apprentice, or upon payment of a heavy entrance fee. Then the apprentices were charged fees which grew to such an extent that they became almost prohibitive. The gilds became close corporations instead of free associations, and the resultant outside competition gradually broke down their organization.

Manufacture on a Small Scale — Whether organized in gilds, however, or working as free individuals, the

workmen carried on their occupations on a small scale. Factories did not exist, although as early as the fifteenth century there were evidences of the possibilities of factory organization.

The Factory System — It was not until the advent of the age of the great inventions that factory organization came into being to any great extent. The latter part of the eighteenth century saw the invention of many new machines, particularly applied to the textile trades, which rendered necessary the grouping of workmen in buildings. The change from the older system was at first gradual, but toward the end it came with increased speed. Under the older method, at first, the workman owned the building in which he worked, the tools of his trade, the materials from which the product was made, and he supplied the power from his own physical energy. He gradually came to work upon materials supplied him by others. Later he worked with tools lent to him by the owners of the materials. Still later those same owners supplied the buildings in which he worked and at last the power which drove the tools, or machines, ceased to be his own physical force, and was derived from steam.

Increased Use of Fixed Capital in Manufacture — With each stage of development there is seen an increase in the amount of fixed capital necessary to carry on an industry. When spinning and weaving were done by hand, the tools were simple and every peasant had his spinning wheel and hand loom. When the spinning jenny and the power loom were to be used, the cost was too great for the individual, unless he possessed a large amount of capital. The workman lost more and

more the possibility of becoming a master and tended to become a mere wage earner, supplying nothing but his physical powers and his skill toward the manufacture of the completed product.

With each stage of growth there is seen an increase in the amount of production from the individual. Each stage means an increased use of the principle of division of labor. With every additional machine the necessity for the use of highly skilled labor is lessened, and, as a consequence, the average productivity of the workman is increased. Factory organization is not profitable unless there exists a market for a large production. Those industries which command only a very small market still depend upon the skill of the individual workman.

It is in the organization of industry on the factory basis that the best examples of the law of increasing returns can be seen. When the industry is on a small scale, each of the workmen must perform the greater number of the operations necessary to turn out the finished product. In the manufacture of furniture, for instance, if the work is done in a small workshop, employing perhaps two or three workmen, the amount produced does not warrant much machine work. Hence there is a great deal of handwork in the necessary planing, sawing, fitting, etc. Each of the workmen divides his time among the various occupations. At one time he is drawing the design of the cabinet or whatever is to be made. Then he is cutting out the different shapes which he must proceed to plane and fit up. Finally he smooths the whole and turns it out ready for polishing. He cannot be expert at all

the operations. Or, at least, he cannot be as expert as one who spends his whole time in one operation.

Under the factory organization the shapes can be cut by machinery in large numbers. The workmen necessary to operate the machines are few in comparison with the amount turned out. The planing and fitting are done by machinery also, and likewise the sanding and finishing. If the expense of producing each particular part of the finished piece of furniture be calculated under the hand-work system and under the factory system, it will invariably be found that the cost of the latter method is very much less than that of the former. On the whole it is safe to say, also, that the factory work will be better done, provided that the element of individual artistry does not enter into the product. Each of the workmen, aided by the machines specially designed to perform functions formerly carried out by hand, acquires a skill and speed which were impossible to the all-round cabinet maker. With each additional application of capital and labor, then, under the factory system of organization, it can be shown that, up to a certain point, there is a greater productivity both in general and proportionately.

But this is only true up to a certain point. There comes a time when the factory has reached its limit for satisfactory production and the law of decreasing returns operates. Managerial ability, for instance, is only capable of handling units of organization of a limited size. Experience has shown that when a factory has reached the stage when further expansion of the individual unit does not produce a *proportion-*

ately greater return, a more satisfactory method of production is to organize another unit.

Complexity of Modern Trade Forms — The first of the economies resultant from factory organization, then, is the increased use of the principle of specialization or division of labor. The Thirteenth Census of the United States gives a list of over one hundred forty different forms of industry, many of which have within their own limits over a hundred different trades. The cotton industry and the boot and shoe industry, for instance, have upwards of one hundred fifty different trades.

Elimination of Waste — The second economy which is a direct result of the factory system is the elimination of a large amount of waste. Goods can be bought in larger quantities and can be more skillfully selected. The better parts of the product can be used for the more important portions of the finished articles. Waste cut from the better goods can be used in the construction of less important parts.

Transport is economized through the use of carloads of goods instead of small individual orders. Overhead expense — rent, lighting, heat, office service, and so on — is much less *per unit of production*. By-products can be much better dealt with when the industry is on a large scale than under the older small-scale organization.

Problems of Production — The problems of production have not been decreased, however. They are still as numerous and as important as formerly. But the large-scale production has made possible the scientific attempts at solution of the problems. With-

out attempting to make an exhaustive list of these problems, the main elements may be indicated.

1. *Location of Industry* — First there is the problem of the location of the industry. Under small-scale production industries were scattered far and wide and little attempt was made to locate the industry in the most suitable position. Transport being badly organized, the market for the sale of goods of any kind was necessarily small and hence production was scattered over a large number of small units. With transportation improved (and this is only possible where there is large production to keep the systems of railroads, canals, and ocean carriers busy), industries could select the best situation.

In deciding the location of an industry some of the points to be considered are as follows :

First, labor must be available, and labor of the right class. It would be folly to set up, say, a watch-making plant, where the only labor available was that of, let us say, Indians.

Second, the raw product must be easily obtained. Raw material should not be drawn from a distance unless transportation is cheap or unless it is drawn from a spot where the actual manufacture is impossible for other reasons, as in the case of the rubber industry, for example.

Third, power for the machinery must be easily obtained. This means proximity to coal supplies or electric power. Finally the markets for the sale of the goods must be convenient. This does not necessarily mean that the markets should be near. But they must be reached without undue expense for transportation. In the early years of the economic history of the United States human food products were often used for feeding pigs, as the cost of transporting

them for a greater distance than twenty or thirty miles was so great as to make the price to the consumer prohibitive.

2. *Capitalization* — The second problem is that of capitalization. The funds for the initial expense of commencing the industry must be procured. A decision must be made as to the methods of financing the new industry. This is a matter which will be considered in greater detail in the next chapter. In all probability the industry must be run with borrowed capital. That is, it must avail itself of the funds of investors who look to a return on their investment without themselves contributing much time to the management.

3. *Factory Organization* — Having selected the site and obtained the funds, the next step is to organize the factory. The directors of the corporation will be elected by the stockholders. They in turn will appoint their president and officers. Of these latter there are three of great importance, the production manager, the office manager, and the sales manager. The production manager will plan very carefully the arrangement of all the machinery so that there will be no waste motions in sending the partly finished product from one machine to the next. He will decide the number and grouping, the training and payment of the workers; the purchase and storing of the raw materials and partly finished goods.

The office manager will attend to the accounting processes. He must keep track of all disbursements and receipts, calculate the profits and losses, so that a clear presentation of the state of the business can be made at any time.

The sales manager must take care of the processes necessary to distributing the goods to the consumers. He will control and train the sales force, arrange for advertising, and so forth. Each of these managers is essential. In small businesses, of course, the three may be included in one individual, but the larger the business the more necessary is it to specialize. It is seldom true that the most efficient production engineer is also an efficient salesman or accountant. And the good accountant cannot be expected to have an expert technical knowledge of the manufacture of the product of the business.

4. *Scientific Management* — In the actual methods of production there is room for improvement in a great many ways. The most carefully thought-out method of production is, perhaps, that of those who have developed what is known as Scientific Management. Under scientific management the production is first analyzed into its main parts. Then a further analysis is made of each part until finally the individual motions of the workman are considered.

An expert workman is set to perform his usual task. While he is at work every action is noted, sometimes moving-picture records being taken. Wherever waste effort, useless motions, or strain of any kind can be seen, attempts are made to alter the motions so as to eliminate the waste. These attempts sometimes mean changes in the handling of tools by the workman, sometimes changes in the design of the machine. Occasionally additional new machinery is suggested.

When the final motions are arrived at, perfected after many discussions, each of the workmen is trained

in the perfected methods. The materials are routed in the best possible manner, and the workmen are stimulated by the offer of higher rates of pay.

There can be no doubt whatever that scientific management, properly carried out, results in a very great improvement in efficiency. In actual experience it has been shown that efficiency of average workmen can be increased as much as three or four hundred per cent. It must be admitted, however, that there is a tendency occasionally to consider the workman too much in the light of a machine. This is due rather to a wrong interpretation of the system than to the idea of scientific management itself.

A careful use of the knowledge of the dangers of fatigue and of the importance of rest and change, gained from the experiments of the psychologists, removes much of these dangers. The danger of underpayment, one of the commonest causes of inefficient work, can also be removed by a sound application of the principles of scientific management. The key to the system is to be found in the scientific observation of method with a view to eliminating all waste effort and the scientific application of psychological knowledge to the conditions necessary for the best production. This latter point includes the consideration of the stimulus to effort due to good working conditions and the contentment resulting from just compensation for work done.

CHAPTER IX

THE ORGANIZATION OF CAPITAL

In an earlier chapter it was stated that the present system of economic organization was one of modified competition. The question now to be considered is the means whereby competition between the owners of capital has been eliminated. The whole basis of the organization of capital consists in the attempt on the one hand to eliminate competition and on the other to make that competition which remains as efficient as possible.

Failure of Competition — It is now generally admitted that, as a method of production, competition is wasteful. When each owner of a small amount of capital puts that capital to work in an industry controlled by himself, the industrial units are necessarily small. Hence all the disadvantages of small-scale production are present. In distributing the product, too, there are grave disadvantages. When too many are competing, the tendency is to cut prices to so low a level that none gets a reasonable return on his expenditure of capital and labor.

Limitation of Competition. 1. *The Corporation* — The competitive system had not been developed to a great extent before it was realized that unlimited competition meant small profits. The establishment of the corporation form of business, under the principle

of limited liability, was in itself a curtailment of competition. It meant the combination of a great number of comparatively small capital sums which, working independently, would otherwise have produced a great number of small competing businesses. The unit of production was greatly increased. But even with this increase in the size of the unit, competition was still so keen that some form of coöperation was bound in time to supersede it.

2. *Price Agreements* — The great difficulty that was felt was the lack of control over prices. When prices were fixed entirely by competition, the tendency was to reduce them to the lowest level. This was unsatisfactory from the point of view of the manufacturer, although it had an undoubted advantage, at least apparently, from that of the consumer of the manufactured goods. Realizing that indiscriminate and undue competition meant small profits, manufacturers first agreed to fix prices by mutual consent. Such price agreements have been very common during the past hundred years. They exist to-day in many industries, and they have undoubtedly caused a rise in prices with consequent satisfaction to the manufacturers.

But an agreement to maintain prices represented also an agreement to control production. In general it may be said that the higher the price of an article, the smaller will be the quantity sold. If then, an agreement is reached whereby prices throughout a particular industry are maintained at a fairly high rate, following on a period of competitively fixed low prices, there will obviously occur a reduction in the amount of the goods actually sold. That means a curtail-

ment of production. Now each of the manufacturers who has signed the agreement to maintain prices is anxious to maintain as high a production as possible so as to reap the full benefit of the more profitable scale of prices. If there is no other method of curtailing competition than a mere agreement as to selling prices, there will inevitably be a tendency for some member of the associated group to try a slight secret cut in prices in order to get a larger share of the sales. Hence there arises at the very outset a tendency for the agreement to break down. For a cut in prices cannot long remain secret, and an agreement which is not carried out is worthless.

Such an agreement has as much actual value as would a law for the breach of which no penalties were provided. If there were no punishment for theft, for instance, there cannot be any doubt that the crime of theft would increase. This is not an argument for all sorts of punishments, of course, but it is obviously true that a law is of no value if there are no provisions for making it effective. In regard to these price agreements the necessity for some form of compulsion on the members of the associated group has been readily seen. In some cases fines have been instituted by the association for any breach of the agreement. But even these fines are not very satisfactory unless there is some means whereby the payment of the fines may be enforced. To enforce this payment it has sometimes occurred that the members of the group, upon signing the agreement, deposited with an executive committee or some outside body the amount of the fine. Then if any breach of the agreement were proved,

the fine was automatically forfeited and became the property of the group as a whole.

Example of Price Agreement — One of the best examples of a simple price agreement is that of the North Atlantic Passenger Conference. This shows at once the advantages and disadvantages of the system. The Conference was formed for the purpose of maintaining a uniform schedule of passenger rates, particularly third-class rates, on the lines running from the European ports to the United States. These rates have been maintained on the average at something like thirty to thirty-five dollars. Once or twice, however, a member has broken away from the group, believing that it could obtain a greater proportion of the traffic by a slight reduction of prices. There immediately ensued a rate war. The other members of the Conference at once entered into fierce competition with the recalcitrant company. Rates were reduced at times to as low as twelve or fifteen dollars for a third-class passage. This was considerably less than the cost to the companies, and obviously, therefore, the war could only continue for a limited period when a new agreement was reached.

3. *The Kartel* — In order to prevent the periodical recurrence of such rate wars a further agreement is necessary, an agreement to divide the total business equitably among the producers. This form is represented in the German *Kartels*. The Westphalian Coal Syndicate is perhaps the best example of this sort of organization, although the former Michigan Salt Association provided an American illustration. The Coal Syndicate made a careful estimate of the

amount of coal which could be sold at a remunerative price and then distributed the total necessary production among its members in proportion to the extent of their productive powers. The selling of the product was carried out, not by the individual members of the syndicate, but by the syndicate as a whole through what were known as Selling Bureaus.

The result of this form of organization has proved very satisfactory *to the producers* in those countries where it still exists. In some countries, however, as in the United States, these Kartels are deemed to be contrary to the common law, under which they are considered to be conspiracies in restraint of trade.

4. *The Pool* — Another method which has had numerous examples is what is known as the pool. There are various forms of pool, however, of which we shall consider only the most important. The principal form was an agreement to pool all orders and have them executed proportionately to productive capacity of the members and to pool also the prices obtained by the sale of the goods.

All such agreements, however, have the very grave defect that they still permit of the existence of duplicated effort. It is quite possible that two or three members of the group have facilities sufficient to produce all the goods necessary to satisfy the market, or at least to satisfy all the demand at the price which the association deems remunerative. The work of all the other producers, therefore, is more or less wasteful. If there is to be real efficiency, there must be control of both ends of the business, the producing as well as the selling end. Although the price agreements elimi-

nate competition from the selling department, competition among the producers is still allowed. In order that all competition should be removed a greater approximation to monopoly of both production and selling must be made.

5. *Monopolies* — The great tendency of modern times is towards the development of monopolies. In this chapter no attempt will be made to discuss monopolies from the standpoint of the consumer. This must be left for future discussion. At present our concern is with the methods of organization and the nature of the economies produced.

Monopolistic organization is only possible where the economies of large-scale production can be secured. In those industries where individual skill is necessary there is little if any tendency to monopoly. There is, for instance, no possibility of monopoly in the painting of pictures. But there is undoubtedly much greater possibility in the reproduction of those pictures. The original paintings require a certain amount of individual skill and insight into the artistic values. The reproduction of the pictures involves the use of more or less mechanical processes. The reproduction of famous paintings on picture postal cards which are sold by the million is a large-scale business. The original paintings were the work of great artists. The same is true of the modern printing business as compared with the medieval form of copying manuscript. The monks of the middle ages made their copies of the writings of the fathers works of art in themselves. The modern printer makes thousands of duplicates, in which the artistic effort in producing one is reproduced exactly

in all of the others. Hence large-scale production is necessary, where formerly it was impossible.

There are very many forms of monopolies successful in a greater or less degree, and known by names which are commonly used in ordinary speech. So common are these terms, however, that they are frequently misused. The average person who speaks of trusts, for example, seldom does so in the accurate sense. To him the word *trust* is synonymous with monopoly. Now it is fairly true to say that, with the exception of those industries which are definitely the care of the governmental organization, such as the post office, there is no true monopoly existent. There are organizations which approach monopolies, however, and it is with these that we must deal.

6. *The Trust*—The most familiar term is the Trust. The word was first used in connection with a particular form of organization arising out of the growth of the Standard Oil Company. In this case a number of competing corporations were grouped together, and the stock of the individual corporations was assigned to a group of Trustees in return for Trust Certificates. The whole of the organization of the united corporations was left in the hands of the Board of Trustees and dividends were paid on the trust certificates and not on the original stock. This form of organization was not objected to merely on account of the form, but rather on account of the monopoly which was thereby attempted. The form was attacked under common law on the ground that it was a conspiracy in restraint of trade, and so was no longer permissible. But although the trust form has disappeared, the institu-

tions which were combined under that form still remain. The form is changed, but the fact remains the same. The principal form under which what were formerly trusts and what are now often called trusts are organized, is more accurately known as the *holding corporation*.

7. *The Holding Company*—It will readily be understood that the control of a corporation rests in the hands of the stockholder or group of stockholders who control a majority of the stock. As a rule each share of stock carries one vote. If five men club together to buy a share of stock for a thousand dollars, they have between them the right to one vote at the stockholders' meetings. If one man owns a hundred of such shares, he has one hundred votes. In any case, then, the man or group who owns fifty-one per cent of the stock is able to outvote all the other stockholders. They have no more say in the management of the business than if they had no stock at all. Indeed it is not really necessary in most cases for the individuals to possess the whole of the fifty-one per cent. All they need to secure absolute control is to secure that amount of voting power. A compact group or single individual who owns let us say, forty per cent of the stock of a company, has usually the power of deciding who is the president of that company and the board of Directors, unless the remaining stock is held by another individual group. If it happens that the rest of the stock is held by a great number of small holders, then his power is practically supreme. For the great majority of the stockholders will not vote personally at the general meetings. They will send their

“proxies” as a rule to the President of the Corporation. The group or individual who controls the appointment of the president, therefore, controls also the voting of the proxies, as well as of his own shares.

It is obvious, therefore, that in order to decide the policies and methods of operation of a company, all that is necessary is to gain control of fifty-one per cent of the voting power in that corporation. Now suppose a group of men wish to control several corporations. They may pool their capital and with the total obtain control of each of the companies. Their “pool” may be organized under the corporation laws as a “corporation formed for the purpose of holding stock in” such and such companies. This new corporation does not need to possess all the capital of the individual companies which it desires to control. At most all that is required is the fifty-one per cent of stock, and even this amount, if the work of the holding corporation is skillfully carried out, need not be necessary. Essentially there is no difference between this form of monopolistic organization and the older form of the trust, except, possibly, that the new form gives the same results with a little more economy of capital.

The holding-corporation form makes possible the control of a great industry by a small group who, of themselves, possess only a comparatively small proportion of the capital necessary to conduct the industry. Figure 2 will help to illustrate this possibility. The four squares, A, B, C, D, represent, let us say, four boot-and-shoe-making corporations, each capitalized at one hundred thousand dollars.

The Holding Corporation holds fifty-one per cent of the stock in each of the companies. Its total capitalization consists merely in the amount of stock of the

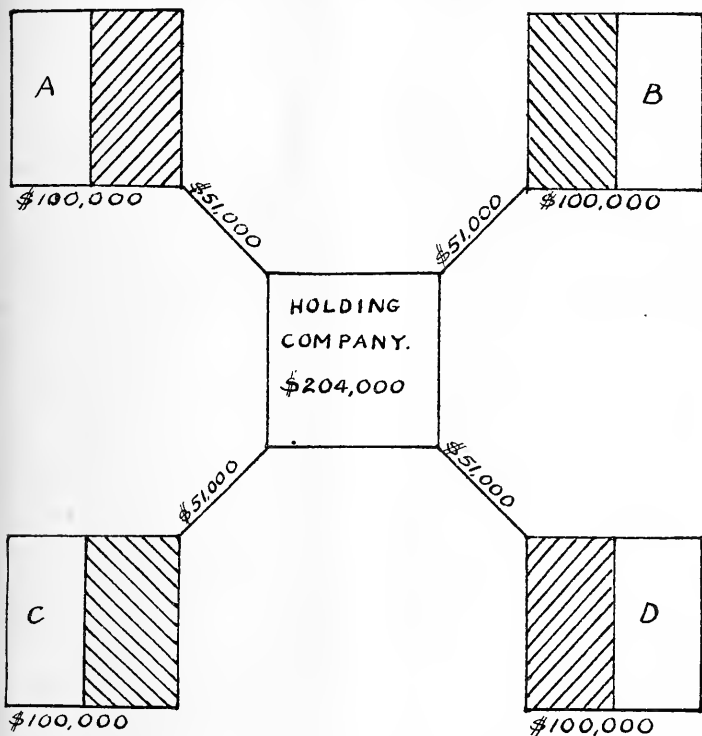


FIG. 2.

other companies which it holds, and this amounts to two hundred and four thousand dollars. With this sum it is able to control a capital of four hundred thousand dollars. But this is not all. The stock in

the holding corporation may have been put on the market, with the exception of fifty-one per cent necessary to reserve control for the principal stockholders. These latter, therefore, with a capital of a hundred and three thousand dollars are able to control entirely the corporation's two hundred and four thousand dollars, and thus in turn control the working of the four boot-making companies.

This is the form in which most of the modern "trusts" are organized, and a recent enumeration gives a list of some two hundred and thirty such organizations.

Another form is the *merger*. This is merely the absorption of one organization by another, or the combination of two or more corporations into one.

Uniform Object to Eliminate Competition — Whatever be the form, however, the aim is the same in all cases. It is to eliminate competition to as great an extent as possible. Actual monopoly, as has already been said, has not been attained. But actual monopoly is not necessary for the purpose of controlling prices. If the competing companies are only able to supply a small portion of the total production, it is likely that they will, without any formal agreement, charge a price which is approximately equal to that charged by the "trust." If they make an unduly strong attempt to beat the monopoly's price, they will subject themselves to very severe competition, which may easily ruin them.

Effects of Monopoly Organization — It is not an easy task to estimate the effects of such quasi-monopolistic organizations. As far as the securing of large-scale

production economies is concerned, it is probably true that the monopolistic form is economical, but it is not necessarily so. There may still be a great deal of waste, and if the monopoly is very powerful, it may lack the stimulus necessary to force it to secure all the possible economies which production on a large scale should entail.

Again, it is quite true that monopoly organizations may find it more profitable to sell a comparatively small amount of goods at a large unit price than to sell great quantities at a smaller figure. This question of monopoly price, however, is one which will come up for consideration in a future chapter.

Improvements in production are not always introduced readily in a monopoly. This is one of the criticisms aimed at government operation of businesses. Improvements in manufacturing methods often entail very heavy expenditures for new machinery while the old may not be nearly worn out. It has been charged against several big combinations that they have bought up patent rights to new inventions with the definite idea of preventing the new inventions being used.

On the reverse side, it may be said that considerable overlapping of production may be avoided under a monopoly organization. Unnecessary competitive advertising may be saved. It is often urged, also, that benefits to the consumer result from lower prices charged by monopolies. It is true, indeed, that some monopoly commodities, as, for example, illuminating oil, have become cheaper under partial monopolies than they were formerly under free competition. But that does not mean that the prices charged are as low

as they ought to be. It may be that had free competition still obtained, together with more modern methods of production, the price would be still lower.

Control of Monopolies — The question of the control of corporations which approach the monopoly form is one which is exciting a great deal of public interest. This is naturally so, for the public is quite right in being anxious not to let the important services and commodities of life drift into the hands of a small group whose only interest is to make the highest amount of profit. The arguments usually alternate from the advocacy of government control to that of government ownership. Without at present discussing the arguments in detail, it may be said that there is considerable justification for each point of view. It is doubtful at present whether the governmental forces are sufficiently well organized to take charge of the operations of great manufacturing industries. But these organizations must be subject to some form of control. They must not be allowed to levy tribute upon the general population. Control, however, is a word with only relative force. Some government interference is, if not exactly welcomed by the monopolies, at least easily tolerated. The tendency, however, is towards the increase of control to the point where the distinction between control and ownership almost ceases.

Justification of Monopolies — Whether it be ownership or control, however, there can only be one justification for the existence of monopolies. That is, they must be able to work with economies impossible under a system of modified or free competition. They must

actually eliminate waste in production. Prices must not be based on the idea of securing the largest profit, but rather with a view of securing the widest sale at a price which provides the normal return for capital and labor.

Further the capitalistic organization must be such as to protect the small stockholder as well as the large. Under the holding-corporation system, the small stockholder stands little chance of protecting his interests. Theoretically he has a vote, but a theoretical vote is of little importance when it is always overthrown in practice.

A further point arises in connection with the permission of competing organizations in businesses which are of the nature of monopolies. Most public utilities are best operated as monopolies, whether publicly owned or not. Competing street car and lighting systems, or telephone systems are undoubtedly undesirable. Past experience in many cities has proved this beyond a doubt. At the time of writing, the crisis of a world war has brought into prominence the evil effects of competing railroad systems throughout a country. Practically all public utilities ought to be conducted as monopolies. This is usually admitted, but the points of dispute arise from questions of ownership and control. Some discussion of these questions will be given later after the student is more familiar with the problems of exchange and of labor.

CHAPTER X

VALUE

Meaning of the Term *Value* — We have already seen that there are many meanings which can be understood from terms used in our study of economics. Dealing, as it does, with matters which affect our daily lives, economics is bound to borrow its terms from common language. But common colloquial language is seldom definite. We realize when talking in ordinary conversation what is meant by the speakers rather than what is meant by the particular words. The word *value*, for instance, has many meanings. When we ask what is the value of a certain piece of land, we may mean how may it be used; but we may also mean how many dollars are necessary to purchase it. We speak of the value of the right to freedom of thought, the value of fresh air, the value of good health, the value of a loaf of bread or of a piano, and so forth. In speaking to a doctor, for example, we ask what is the value of bread and he will answer in terms of the usefulness of bread as food. But when we ask the same question of the baker, he will tell us how many cents a loaf costs.

If we are to use the term with any degree of accuracy, it is necessary for us to give it a definition which will limit the meaning of the word *value* in such a way that we shall always understand the same idea when

we hear the word. It does not follow that the meanings which must be excluded are necessarily wrong. Obviously this is not the case. But from our point of view there are certain aspects which do not affect us. In economics we are endeavoring to measure motives and laws. We wish to deal with concrete matters as much as possible. Hence what we may here term the ethical meanings of words are not considered.

In economics, the word value signifies a ratio. It means the ratio in which one article exchanges for another. If it is found that a pound of coffee exchanges readily for half a pound of butter, we say that the value of a pound of coffee is equal to that of half a pound of butter. That is, we refer to value as value in exchange. This is the only sense in which we shall use the term in our future discussions. The purpose of the chapters which follow is to consider how value is determined and how the process of exchange is carried on. That is, we must study the reasons which cause variations in the ratio of exchange of one commodity for another and the mechanism by which such exchanges are made.

In Chapter IV it was shown that all production was production of utilities, and so likewise was all consumption. In exchange it is exchange of commodities and services with which we deal. The exchange will depend very largely upon the utilities of the commodities and services. Utility was defined as the power to satisfy wants or desires. A piece of steel shaped so that it will cut wood or metal possesses utility only because there is a desire for such an article. The services of a doctor or lawyer possess utility because there

is a desire to consume those services. A bottle of whisky possesses utility because there is a desire to consume that whisky.

Diminishing Utility — There are, however, variations in the intensity with which these commodities and services are desired. For example, if we are very thirsty, our demand for some thirst-quenching liquid is very strong, but when we have satisfied our thirst the desire is much weaker. With each additional drink our desire for more water is reduced. In other words, the utility of the glass of water diminishes with each additional glass. No estimate of the value of the first glass can be made if a person is on the verge of death from thirst. In a desert where water is of paramount importance, the prospector would sometimes give his last ounce of gold dust for a single drink. But let him believe that he can reach the next water-hole without a further drink, his desire is reduced considerably. When he has actually reached the water supply, then he will exchange nothing for the drink. His wants being satisfied, there is no further utility in the water.

Let us take a further illustration. Most of us have a desire at times for coffee. The desire has not the same intensity for each of us, however. In an individual case a man may so desire coffee that he is willing to pay, let us say, ten dollars for a pound of coffee. At that price, however, he will content himself with one pound. If the price be reduced to eight dollars a pound, he may buy another pound. In this case it would seem, therefore, that the utility of the first pound of coffee is represented by ten dollars, but

that of the second is only eight dollars. If the price be reduced to six dollars, then he will buy another pound, showing that the utility of the third pound is six dollars. And so the utility of each additional pound of coffee falls until a point is reached, let us say, at thirty cents a pound when he will buy no more coffee, no matter how much further the price be reduced. His wants are all satisfied in respect to coffee when the price falls to thirty cents.

This gradual fall in the utility of a given commodity is spoken of as *the law of diminishing utility*, and it may be expressed as follows. The utilities of additional units of any commodity to any consumer tend to fall as his supply of that commodity increases.

As we have seen, however, the element of price enters into the question. In our last illustration the utility of a single pound of coffee was represented by ten dollars. If we tabulate the particulars, we shall have a statement something like this :

PRICE	QUANTITY CONSUMED	PRICE	QUANTITY CONSUMED
\$10	1 pound	\$3	6 pounds
8	2 pounds	2	7 pounds
6	3 pounds	1	8 pounds
5	4 pounds	.50	9 pounds
4	5 pounds	.30	10 pounds

Marginal Utility — If the price had gone above ten dollars a pound, no coffee would have been bought by this particular consumer. But he was willing to pay as high as ten dollars for one pound. The dividing line between one pound of coffee and none at all is represented by the price of ten dollars. This dividing

line is called the margin. The marginal utility of one pound of coffee is ten dollars. The marginal utility of the second pound is eight dollars; of the fifth pound four dollars, and so on.

When the price of coffee has fallen to, let us say, two dollars a pound, the individual under consideration will buy eight pounds. Rather than buy any more coffee at that price he will spend his money on some other commodity which, he thinks, will yield him more satisfaction. The question which he will put to himself, unconsciously, perhaps, is this: "Will there be more satisfaction out of an additional pound of coffee if I spend another two dollars than if I spend that additional two dollars on tea or tobacco?" If he decides not to expend another two dollars on coffee, then it is plain that the marginal utility of coffee is reached at eight pounds. It is true that he would gain additional satisfaction from more coffee, but the additional satisfaction would require an expenditure of another two dollars and he believes that he could get more satisfaction from spending the two dollars on something else.

Present and Future Satisfaction — There is another aspect of the question, however, besides that of the marginal utility of two different commodities. The marginal utility of one commodity at different times will vary. If the question is one of immediate satisfaction, it is not the same as if the satisfaction is to be postponed to the future. Suppose a man wishes to buy a box of cigars and the price is ten dollars. He wants that box immediately. If he is told that he cannot get the cigars until next week, he may think

that it is better worth while to spend the money on some present satisfaction unless, perhaps, the tobacco-nist offers to let him have the cigars next week at eight dollars. In that case he may decide to save eight dollars for the cigars and spend the two on immediate satisfaction. From which it is clear that the marginal utility of a box of cigars to be had immediately is greater than that of a similar box for which the purchaser has to wait.

In making a decision to purchase anything the question which has to be decided is one of relative marginal utility. If the individual above referred to is in doubt whether to buy a few cigars or to go to the theater, the marginal utility of the one satisfaction is almost equal to that of the other and his choice decides which has the greater. Of course, the decision is not the result of careful thought each time. The mere fact that a decision is made shows that to that man at that particular time the marginal utility of the one satisfaction which he chooses is greater than that of the one he rejects.

The ratio between future and present satisfactions varies greatly with peoples and with individuals. Children and savages place a very much higher value upon present satisfactions than upon future. Races of higher culture and individuals of greater intelligence make less difference between the two.

As value is merely a ratio of exchange, in order to know the value of any article we have to discover for what other article it will exchange. An article cannot be said to have value, in the economic sense, of itself. There is no such phrase as intrinsic value in economics.

Consequently in any exchange the values of the exchanged articles are equal to one another. If a man exchanges a city lot for an automobile, he feels that he is getting something which he desires in place of something which he desires somewhat less. The other party to the transaction has a similar feeling. The difference is not a difference in values, but a difference in satisfactions. The owner of the lot would not give his lot for the automobile unless he felt that he could obtain more satisfaction from the machine. And likewise the owner of the automobile thinks that the lot will give him more satisfaction than he obtained from his car. Both parties are, therefore, satisfied.

This refers, however, to individual transactions, and it is not with these instances that we are concerned. What we desire to find out are the laws which govern all exchanges, if there be any such. We have already seen in an earlier chapter that utilities are only produced to satisfy desires which are either existent or latent; that is, desires which are already well known and others which are not known to exist, but are waiting the utility which will satisfy them and thus call them into being. We know, moreover, that in our present organization each one of us is a specialist of some sort. None of us produces for himself all that he requires. There must, therefore, be some means of securing the correct distribution, or, at least, the approximately correct distribution of the productive effort in order that our desires may be met as well as they are.

Effective Demand — It is true that many of our desires are not met. The absolutely contented man

does not exist, and if he did, it is doubtful whether he would be of any great service to humanity. Civilization does not grow with a diminution in the number of wants, but by their increase. But every want does not bring forth the necessary production. Something more is required than mere desire. There must be something produced to exchange for the new production which is to satisfy the want. For example, the unskilled laborer may desire with all his heart to possess a limousine. But that desire will not bring about the production of limousines. For in order that the laborer may obtain one he must be able to exchange something for it, and it is only a remote possibility that he possesses any article which the limousine producer is willing to accept in exchange. The demand exists, but it is not an effective demand. In order to become effective the producer of the limousine must be willing to accept something in exchange which the laborer is able to offer. When we say, therefore, that demand produces the supply, or, to be more accurate, that demand causes the supply to be produced, we must qualify the word *demand* by considering only the effective demand. And there must be a similar qualification in regard to supply. A supply of a commodity may exist, but it may not be available. The iron ore in the Andes unquestionably exists, but it is not an element in the supply of iron because it is not worked.

Meaning of Price — Again, when it is said that the ratio at which any commodity exchanges for another depends upon the demand for and the supply of the commodities, the same restriction in the meaning of the two terms must be made. In order to make our

discussion a little more simple we shall speak of exchanges of commodities for money. This, as we shall see later on, is merely an intermediate form of exchanging goods for goods. But for the present purpose the ordinary meaning of the word *price* will be satisfactory. Stated simply, price is the ratio at which a commodity or article or service exchanges for money. To repeat the statement made at the beginning of this paragraph in another form we may say that price is governed by supply and demand. This statement is accepted commonly, but it is very frequently misused and we must be careful to understand all the assumptions that are made when the phrase is correctly used.

Let us take the case of the price of coal for the sake of illustration, and consider it first from the point of view of the demand. Coal is used for many purposes, — fuel for household fires, for steam engines, for gas production, for coke making, and so forth. The general demand is very great. But the intensity of the demand of the various groups who desire coal varies within wide limits. There are some who must have coal at all costs, or cease their own production; as, for example, steamship owners, and gas companies. There are others who will not have coal unless they can get it at a very low price. Between the two extremes there are many grades. These grades can best be distinguished by the prices they are willing to pay for the coal. If coal should be sold only at a price of eighty dollars a ton, a great many would-be coal users must refuse to purchase. At that price their demand is not effective. Some there will be who must have coal and who can afford to pay that price. These constitute

only a small portion of the total possible purchasers. Now, if the price be reduced to forty dollars a ton, there will be an additional group who will now buy coal. The reduction in price has made effective an additional demand. Let the price fall now to twenty-five dollars a ton and the effective demand will be very greatly increased. When the price is reduced to five dollars a ton, there is an immense increase in the effective demand.

Relations between Supply and Demand, and Price — Now turn to the question of the supply. When the price is as high as fifty dollars a ton, almost every available ton of coal will be offered for sale. The physical supply becomes almost the same thing as the effective supply. But as the price falls, some of those who have a supply of coal will refuse to sell. The lower the price, the smaller will be the effective supply, until, when the price has reached the point at which the demand is greatest, the supply is at its lowest limit. We may say then, that, as a rule, the lower the price the greater the demand and the smaller the supply.

In the case of commodities which are actual physical necessities differences in price will not affect the amount demanded except to the extent that possibly some of those whose demand is not effective will die and so reduce the possible demand.

Elasticity of Demand — The difference which a rise or fall in price will make to the effective demand will vary according to the nature of the commodity. The more nearly the commodity approaches to a physical necessity the less difference will an alteration in price effect. We may speak of the possible variations in

demand due to a change in price as the elasticity of demand. When a fall in price causes a large increase in the effective demand, the demand is said to be elastic. When there is little difference caused, the demand is inelastic. As a rule we see the greatest elasticity of demand in those articles which are luxuries. This is naturally so. All of us desire the luxuries as well as the necessities of life. We must first satisfy ourselves in regard to necessities, but after that we seek the luxuries. The reason we do not all succeed in obtaining as large a share of the luxuries in life is that our demand is not effective. The price is a little above what most of us can afford to pay. But a drop in prices will make immediately effective a great deal of latent demand.

There are other causes, however, which affect the elasticity of demand. There are hardly any articles or goods which can be considered in themselves to be absolute physical necessities. Food is a necessity, of course, but food is a word which includes in its meaning many articles, none of which is by itself essential. For instance, we may say that wheat is a necessity. In so far as it is a source of food we may safely so regard it. But if the supply of wheat is only effective at a high price, the demand will fall off very largely. This is because there are other forms of food which will satisfy our needs as well or almost as well as wheat. Consequently a high price in wheat may cause a very great fall in the demand, as the demand for food can be satisfied by substituting barley or some other cereal. The existence of substitutes, therefore, will tend to make an inelastic demand elastic.

Let us consider once more our illustration of the coal

supply and demand. Coal has, as we have said, many uses. Take its use as fuel. In our climate fuel is a necessity. If coal were the only form of fuel, it would be an absolute physical necessity, and its demand, therefore, would be inelastic. But there exist many other forms of fuel. It might happen, for example, that the price of coal was high while oil was cheap. The demand for coal would be transferred to oil. If we suppose that coal is regarded as the best form of fuel, then as soon as the price of coal approached that of oil, the former oil-users would change to coal, thus increasing the demand. Consequently the demand for coal instead of being inelastic, is elastic.

In all considerations of the elasticity of demand the presence of substitutes must be taken into account.

The same argument which has just been applied in regard to the elasticity of demand applies with equal force to the elasticity of supply. The higher the price, the greater will be the effective supply, but in the case of some commodities a small increase in price will cause a large addition to the supply, while in others it takes a very considerable rise in price to affect materially the supply. In the case of those goods which require a large fixed capital to secure efficient production, if the actually existing supply is equaled or nearly equaled by the demand, it will require a considerable rise in price to cause new production. A small rise will probably not be sufficient to encourage manufacturers to invest new capital in the manufacture of the particular articles in question, but a large increase will tempt them to start new factories so as to reap some of the profits due to the increase in prices.

At the same time if there are efficient substitutes, a small increase in price will tend to encourage the manufacture of those substitutes, provided the fixed capital required for such production is not so expensive as that required for the article itself.

CHAPTER XI

THE LAW OF SUPPLY AND DEMAND

It is frequently asserted that prices are governed by the law of supply and demand. In the last chapter it was shown that the terms *supply* and *demand* were not quite so simple as they would appear to be. Before we can understand exactly what is meant by the law, we must examine very carefully the theory of the competitive system of distribution. That can best be done by taking simple illustrations.

The Factors of Exchange — Suppose there are two schoolboys one of whom possesses more oranges than he desires and the other a similar superfluity of apples. There is here a possibility of an exchange of oranges for apples. Let us take first the case of the boy with the oranges. He may or he may not want apples. If he has no wish for apples, there will be no exchange unless he is able to exchange apples for something which he does want. Assuming, however, that he does wish to obtain some apples, the question which arises for him is, how many oranges is he to give for how many apples. This will depend upon several different factors. His desire for apples may be very strong or very weak or medium. If he has a passionate fondness for apples, it will tend to make him willing to exchange a large number of oranges for one apple. If he has only a very slight desire for

apples, he will only give a small number of oranges in exchange. If his desire is only medium, then we may to a large extent ignore it as a factor in the exchange, and turn to the next. He may or he may not be very fond of oranges. The higher value he places on oranges the fewer is he likely to offer for apples. Again, his supply of superfluous oranges may be very large or comparatively small. If it is large, there will be a tendency to offer more oranges for an apple than if it be small.

Still further, the number of superfluous apples possessed by the other boy may be large, medium, or small. If it be large, the boy with the oranges will expect to receive a comparatively larger number of apples for his oranges, than if it be small. He may know, moreover, that the boy with the apples is either very fond of apples or not and consequently either unwilling or willing to part with this extra store. All of which will affect the ratio of exchange.

So far we have considered only the existence of two boys. Let us suppose, however, that there are other boys with oranges and apples. This will complicate the question, for the fact that there are others willing to exchange oranges for apples will tend to make the original party to the exchange modify his terms. If A and B possess oranges and C and D apples, A will rather offer a few more oranges than B, in order to obtain the apples, than let B get them. And the fact that he can obtain apples from either C or D will tend to make him offer less to C on the ground that if C does not wish to sell he can obtain all he wants from D.

A further complication results from the possibility of A and B preferring to satisfy their desire for fruit

by taking pears rather than paying too many oranges for apples.

We may sum up the factors that enter into the exchange as follows: From the buyer's point of view, the factors are these:

1. The buyer's desire for the other commodity
2. His desire for the purchasing commodity (apples in our illustration)
3. His supply of purchasing goods
4. The supply of the other commodity
5. The desire of the seller for the goods he sells
6. The desire of the seller for the purchasing goods
7. The presence of other buyers and sellers in the market
8. The presence of substitutes

In the exchange as we have described it, both parties are buyers and sellers at the same time. This is essentially true of all exchanges, no matter how they are conducted, so the point of view of him whom we have called the buyer in our illustration is the same as the seller. In practice, however, unless we are dealing with a case of simple barter, which is common among schoolboys, the exchange is carried on by means of an intermediate commodity which we call money, usually a scarce commodity with schoolboys. This, as we shall see in a later chapter, does not affect the argument.

Strong and Weak Buyers and Sellers — When we consider a larger market than that implied in the above discussion, we shall readily understand that there are many ratios of exchange. The governing factors are not the same for all of the buyers; nor for all of the sellers. One boy may be a strong buyer, that is, his desire for oranges may be very strong while his desire

for apples is weak. Another may care very little for oranges and a great deal for apples. And similarly there may be a difference between the desire on the part of the possessors of apples. The quantities of oranges possessed by one may not be so great as those possessed by others, and so forth. So there may easily be exchanges between some of the orange dealers and some of the apple sellers and not between others, and the ratios of exchange, where exchange actually takes place, will not be the same.

To vary the illustration and to bring in the question of price let us recur to the variations in the price of coal. As we suggested in the last chapter there are some people who must have coal no matter what the price is. If the price be very high, however, only those who absolutely must have the coal will buy it. When the price falls, other buyers whose needs are not quite so imperative will purchase coal, and the farther the price falls, the more buyers will there be, until all have satisfied their desires.

Let us suppose that the high price of coal is twenty dollars a ton. At that price there are buyers for, say, one thousand tons. Should the price fall to fourteen dollars there will be purchasers for four thousand tons. We may, for the sake of example, tabulate a series of prices with the amounts for which there are purchasers, as follows :

PRICE OF A TON	NUMBER OF TONS DEMANDED
\$20	1000
14	4000
8	9000
5	14,000
2	21,000

The Demand Curve — This situation may be conveniently studied by means of a graph or curve, as in Figure 3. This figure is drawn on paper ruled into squares. Following the ruled lines we have two straight lines, OX and OY , at right angles to each other, meeting in the point O . Now let us assume that each

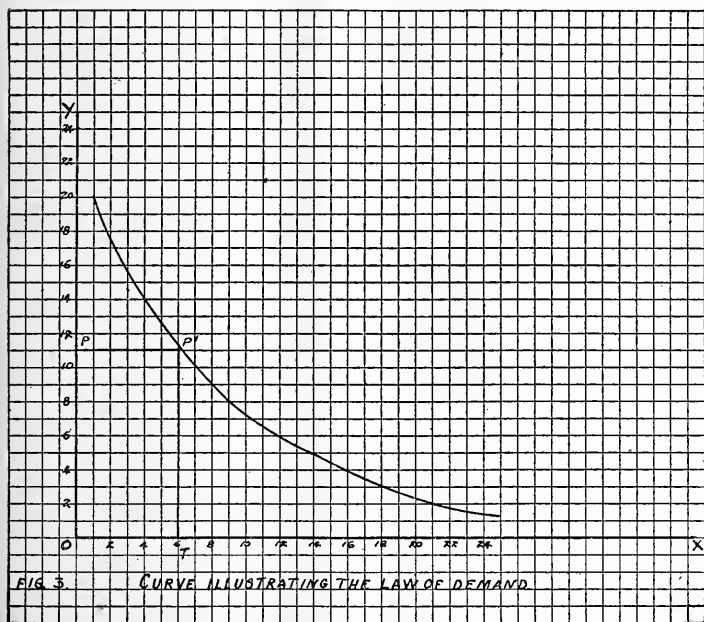


FIG. 3. CURVE ILLUSTRATING THE LAW OF DEMAND.

division in the direction OX represents a given number of tons, say one thousand. Each division in the direction OY represents a price per ton, say one dollar.

Referring to the table we see that the first price was twenty dollars a ton. We therefore count up twenty spaces in the direction OY , starting from the point O . The number of tons taken at that price was one thou-

sand. We therefore move one space in a direction parallel to OX and there mark a point. The second price was fourteen dollars. We count up toward Y fourteen spaces, and, as four thousand tons were taken at that figure, we mark our second point four spaces along in the direction of X .

In a similar manner we mark the points corresponding to the remaining figures in the table. These points are obviously not in a straight line. If we join the points the result will be a series of short, straight lines. But this would indicate that the movement of demand was jerky, which is hardly probable. If we had taken more figures we should have arrived at a further series of points filling up the gaps between the five points taken and it would appear that the demand, moving gradually as the price falls, would follow the same general direction as the five points taken, that is to say, they would follow a curved line passing through the five points. Such a curve we may call the demand curve for coal, according to the figures in our table.

If this demand curve truly represents the relation between the price of coal and the amount purchasers are willing to take, then we may obtain data regarding other prices than those in our table. For example, suppose the price is eleven dollars a ton. The horizontal line drawn from the eleventh space touches the curve at the sixth vertical line. There will, therefore, be a demand for six thousand tons of coal at that price. The total price paid for the coal will be represented by the rectangle contained by the horizontal and vertical lines which touch the curve. In our last ex-

ample, the rectangle $PP'TO$ represents the amount paid for coal at eleven dollars a ton, sixty-six thousand dollars.

Consumer's Surplus — Let us suppose that eleven dollars is the actual price paid at a given time. Total purchases amounting to six thousand tons are taken. But the purchasers of one thousand tons out of this six thousand would have been willing to pay as high as twenty dollars a ton if they had been forced to do so. They have made an actual expenditure of eleven thousand dollars instead of a possible expenditure of twenty thousand dollars. They are, therefore, in pocket to the extent of the difference, nine thousand dollars. This difference between the amount actually paid and the amount that the purchasers would have paid rather than forego the use of the coal, is termed the *consumer's surplus*. The total amount of this consumer's surplus may be obtained from the figure by simply calculating the area inclosed between the lines PP' , the curve, and PY , taking Y as the point at which the curve touches the line OY .

It will be noticed that we have carefully refrained from using the phrase *amount of coal sold*, and have used instead the expression *amount which the purchasers were willing to take*. Because there are purchasers for a certain amount at a given price it does not follow that there are the same number of sellers at that price. There will be many more sellers willing to part with their coal when the price is twenty dollars a ton than when it is ten dollars. As the price falls the amount of coal available to purchasers falls also. The strong holders will hold their coal until a higher

price obtains, the weaker selling when the price seems sufficient to them.

The Supply Curve — We may tabulate the amount of coal available, that is, the effective supply, as we did the effective demand. The table below may serve as illustration.

PRICE OF A TON	NUMBER OF TONS AVAILABLE FOR SALE
\$ 2	2000
5	14,000
8	18,000
14	22,000
20	24,000

These figures may be plotted as a curve in a similar manner to that in which the demand curve was drawn. The result is shown in Figure 4. From this curve the supply available at different prices can be seen. At a price of eleven dollars a ton, for instance, the amount available is between twenty thousand and twenty-one thousand tons, say twenty thousand, five hundred tons.

Producer's Surplus — Let us suppose that the price is fixed at eight dollars a ton. At that figure the amount of coal available is eighteen thousand tons. The total price received, therefore, is eighteen thousand multiplied by eight dollars, or one hundred and forty-four thousand dollars. But there were merchants who were willing to sell two thousand tons even if the price were as low as two dollars a ton. That is, they would have been willing to receive four thousand dollars, but they actually receive sixteen thousand dollars. The additional price received above their minimum is, therefore, twelve thousand dollars which is the *producer's surplus*. There is, of course, a different producer's

surplus for each producer, according as the minimum at which he will sell his coal varies. The total producer's surplus at any given price may be seen from the curve. The area included between the lines OT , TP' and the curve OP' , taking the point O as the point

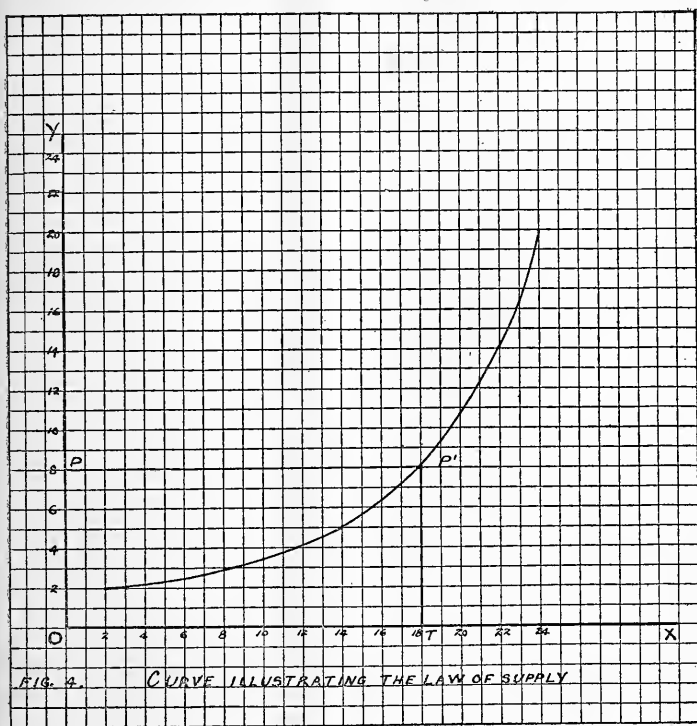
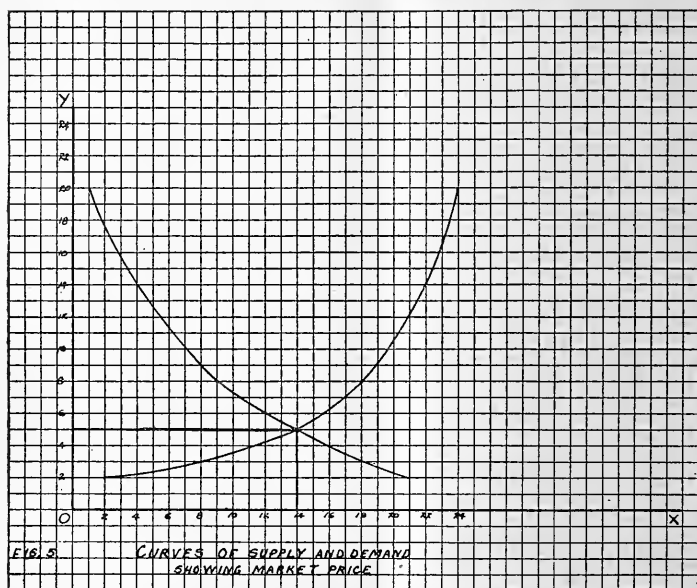


FIG. 4. CURVE ILLUSTRATING THE LAW OF SUPPLY

where the curve meets the line OX , represents the total producer's surplus at the price of eight dollars a ton.

Market Price — These two curves, however, merely represent the variations in supply and demand. The question we wish to solve is this: What is the actual

price at which the coal will be sold under the conditions represented in the tables, or by the curves? If there are any actual sales there must be an equality between the amount sold and the amount bought. This is obvious. Now there is only one point at which the amount available is equal to the amount demanded, that is, the point at which the price is five dollars a ton.



This will most readily be seen if one curve is superimposed upon another, as in Figure 5. The curves cross one another on the price line of five dollars. At that point the demand is for fourteen thousand tons and the supply is also fourteen thousand tons. The natural assumption, therefore, is that the price at which coal will be sold is five dollars a ton.

Definition of Term “*Market*” — This price is termed the market price of coal. We have used the term *market* several times now without having definitely determined what meaning we give to the term. As usual, there are many meanings which may be attached to the word. A market may mean a building in which goods are sold. In the case of a meat market, for example, it will depend upon the person who uses the term whether he means a building in which meat is displayed for sale, or the district in which a man may dispose of meat. Sometimes the word is even used instead of the word *price*. It is important that we should limit the term to one meaning in order that our discussion should be accurate. We must leave to colloquial speech the idea of a market being a building, or representing a price. In the economic sense a market is the area in which all buyers and sellers have equal opportunity for obtaining information regarding the demand for, and supply of, a given commodity, and also equal facilities for buying or selling that commodity.

In some cases the market represents a very wide area and in others it is very restricted. The wheat market, for example, is almost as wide as the world. American dealers know the European demand and supply; they know also how much wheat Australia and Russia are able to offer for sale, and how much they are likely to want for themselves. A similar knowledge exists in Europe, Australia, and Russia. Wheat is readily bought by Europeans in America or in Australia and vice versa, so we have all the conditions requisite to form a market. On the other hand,

the fresh vegetable market is purely local. No one in New York, for example, is interested in the fresh vegetable supplies in central California. By the time those vegetables could reach New York they would cease to be fresh. Hence there is a definitely restricted area in which the fresh vegetables may be bought and sold.

In considering the market price it must always be remembered that we are not dealing with the results of any individual bargain. There are variations in the skill at bargaining which will offset some of the effects resulting from a pure consideration of supply and demand. A weak buyer, for example, may be able by his skill to hide his weakness and convey an idea of strength to the seller, and so obtain a lower price than would otherwise be the case; and the reverse is also true. But these individual variations in skill will tend to cancel one another when we consider the total sales made. It is not to be expected that the bulk of the skill will lie with either the buyers or the sellers; it will probably be equally divided between both. So the number of weak buyers able to hide their weakness will be neutralized by the number of weak sellers who convey an impression of strength.

Limits of Price Fluctuations. Normal Price — Market price fluctuates from day to day and, in some instances, from hour to hour. Its variations, however, have limits. Let us take the case of the production of automobiles. Here the fluctuations in market price are not very wide, but they exist. Now there are engaged in the production of motor cars many different firms, working at varying rates of profit. At

a given price for a machine of a certain standard of quality one firm will make a high profit and another will make just sufficient to encourage it to keep on producing. Now as the market price for this particular machine falls, it will mean that those firms which were working at the minimum profit will cease to produce. The new price renders it impossible for them to gain the minimum rate. But this will mean a reduction in the amount of machines produced, or, in other words, a fall in supply. And this in turn will naturally tend toward preventing a further fall in price, if not in producing an actual increase in price.

Again, if the market price should show a tendency to a steady rise, the increased profits resulting from this rise in price will tempt capitalists to invest new capital in the production of similar machines, and hence result in an increase in supply. This, in its turn, will tend to prevent the further increase in price or even to cause a fall. There is, therefore, an upper and a lower limit beyond which the market price cannot rise or fall for any length of time. For a short period, and owing to conditions which are of a temporary nature, it is possible for the market price to fall below or to rise above these limits, but this is only true for a short time. If the fall or rise seems likely to continue, then the effects above described will inevitably be realized.

There is, then, a price, or rather a range of prices, at which the normal production will be kept up without either increase or decrease. This price is termed the *normal price*. Normal price has no effect upon any given market price. All that it does is to set a general

limit beyond which market prices cannot fluctuate for more than a very short period.

From this discussion it would appear, therefore, that in the long run, prices are determined by cost of production. If the price falls so low that the cost of production is not realized, production will to a certain extent cease, and, therefore, supply will be reduced and so check the tendency to fall further. If the price rises very high above cost of production, new capital will come in to produce more goods, so increasing the supply and producing a tendency to lower prices.

The foregoing discussion of the law of supply and demand rests upon certain assumptions which are not always justified by the actual conditions of exchange. First is the assumption that all exchange is carried on under conditions of free and unhampered competition. This, as we have seen in a previous chapter, is not the case. There is no such thing as entirely free competition to-day. Any country grocer will readily admit that he has to sell certain goods at a price in determining which he has had no say. Monopoly after monopoly is attempted with the very definite end in view of preventing a competitive fixing of prices. It is true that perfect and absolute monopoly does not exist, but the nearer the attempts approach to the ideal, the further is the departure from the competitive price fixing under the law of supply and demand. The question of monopoly price, however, will concern us in the next chapter. Here it must merely be noted.

A second consideration arises in the variations in the knowledge of possibilities of cheaper supplies on the part of the buyers, or higher prices for the sellers.

This is realized by advertisers who strive to obtain the widest publicity for the goods they are trying to sell. It is realized that there may be many buyers for these goods who do not know of their existence and are buying similar goods at a higher price.

The Flow of Capital — This lack of competition and of knowledge as to the conditions of supply and demand affects particularly market price, but normal price is affected also. Following the purely theoretic discussion of the determination of normal price which has been given above, it would seem that the moment prices rose to a point which permitted of profits above the normal rate, new capital would be drawn into the production to take advantage of these increased profits. In practice, however, this is not always the case. The increased profits may not be general knowledge, and those who are reaping them will do all in their power to prevent the knowledge becoming general. Hence the price may stay above the normal level for a considerable period. Ultimately, it is bound to be discovered. But even then the question will arise as to whether the increased production will not bring down prices below the level necessary for normal profits. Capital is said to flow toward industries which yield high profits. The flow is not the even flow of a river in the lowlands, however. It is more comparable to a stream falling down a mountain side. At places it forms deep pools which brim over and the water falls in a cataract. Like most new streams, too, its speed and its variations are greatest also in the early stages of industries. A thin trickle of capital flows towards the production of some new invention or industry —

like the production of moving pictures, for instance. Suddenly the stream tumbles down the mountain side, being filled from other sources until the stream of capital is broad and deep and the rate of increase correspondingly slow.

All these correctives must be taken into account in considering the true working of the law of supply and demand. But this does not entirely detract from the value of the law. If you take an iron ball and suspend it by a string it will, obeying the law of gravity, hang in a vertical line drawn to the earth from the point of suspension. But if you surround that iron ball with a series of electromagnets and constantly vary the currents flowing through those magnets the ball will be drawn from its position and will constantly vary that position as the attracting magnetic force varies in each of the magnets. This does not affect the truth of the law of gravitation. Similarly, although there are many causes operating to deflect and to hide the effects of the law of supply and demand, the law is constantly working nevertheless. What must be realized, however, is that to speak in a loose way of the law of supply and demand regulating prices is to show ignorance of the very many other factors which tend to vary the price of commodities both in long and short periods.

CHAPTER XII

MONOPOLY AND MONOPOLY PRICE

It has been made sufficiently clear in previous chapters that the tendency of modern development is towards the elimination of competition. While it was true that under free competition there was a reasonable prospect of the consumer reaping the immediate advantages in the shape of reduced prices, it has been contended that the ultimate advantage to the consumer did not rest with the competitive system. The free action of the law of supply and demand in a full competitive system tended to reduce prices to a level which was barely sufficient to keep production going on. Manufacture was too close to the margin of productivity. That is to say, each of the manufacturers was working, or tended to work, too close to that point at which profits disappeared, and so there was always the possibility that some few or many would be compelled to drop out of business.

Importance of Stability of Prices — It is to the general advantage of the consumer that prices should be maintained at a steady level. In the long run this is best, even if the level of prices be rather high. This question of stability of prices is one with which we shall deal later on in the discussion of the relation of money to prices. At present it should be noted that when a person contracts to do a certain piece of work

it is absolutely essential that he should know what prices he must pay for his materials. If these prices are constantly fluctuating, as they undoubtedly would fluctuate under the free play of the law of supply and demand, it makes the work of estimating costs extremely difficult, and as a rule the contractor will feel bound to protect himself by estimating upon the safe side, that is, by charging higher prices. Whether we believe monopoly in general to be good or bad, however, we have to admit the fact that the tendency toward this form of organization exists, and it remains for us, at present, to examine its nature.

The great evils which the protagonists of monopoly organization declare to result from competition may be summed up in very few words — low prices and waste. From the point of view of the consumer, provided production is maintained, low prices are anything but an evil. On the other hand, waste is an evil from whatever point of view it may be taken. Admitting, for the sake of the argument, that low prices tend to cause restriction of production, we may admit the possibility that monopolistic organization secures an improvement. But that very admission constitutes the fundamental criticism of monopolies, the criticism that they raise prices.

High prices cannot be maintained, however, unless there is some restriction in the free play of competition, so there is evidently a close connection between monopolies and restriction of competition. The term itself, taken in its strict interpretation, signifies the entire absence of competition. This is seldom realized in practice, however, but it is approximated and we may

use the term in a somewhat looser sense without damage to our argument.

Varieties of Monopolies — Monopolies are of various kinds. There are temporary monopolies as contrasted with those which have a relatively permanent existence. There are monopolies granted expressly by government as a reward for services or as a protection against unfair treatment, and those which have been brought about by agreement between private individuals or corporations. We may deal with the least important first.

Monopolies by Royal Grant — The advantage of being the only person who can deal in a commodity is obvious, and it was no less obvious in the Middle Ages. Kings and dukes were wont to grant rights of monopoly to favorites to the great enrichment of the latter, and to the still greater disgust of their subjects. Even Queen Elizabeth, who was probably as popular a monarch as ever lived, had to give way to the demands of the people for the removal of this kind of monopoly. The monopoly of selling salt, for instance, weighed heavily upon a people who had no other means of preserving meat than by salting. A high price, and those medieval monopolists were never very delicate in their price manipulations, might easily mean ruin. Such monopolies have now ceased, although no doubt there are courtiers yet who wish they were still possible.

Patents and Copyrights — This does not mean, however, that governments have ceased to grant monopolies. Every civilized country has a system of monopolies controlled by the government through the patent laws. A patent is nothing more nor less than a monopoly

right of production and sale. The argument is this. An inventor or author or dramatist has given of his time and thought, and possibly of his money also, to the production of a new instrument or book or play. In so doing he has rendered a service of more or less value to the community, and the community should pay for that service to the person who rendered it. In the case of the invention of a new machine, the government says, in effect, here is a new machine which may or may not be valuable. If it is, those who find it so ought to pay the inventor for discovering it. The only way to find out whether it is valuable is to try it out in use. Let the inventor have the sole right of manufacturing and selling this machine. If the public finds it valuable, it will pay. If it should be a useful machine, it would not be fair to allow any one who so wished to manufacture it and to reap the reward due to the inventor. In order to protect the public from extortion on the part of the inventor and at the same time reap the fruits of the effort of his brains, the exclusive right is limited to a term of years.

The same is true of an author. He writes a book which the public may buy if it wishes. If it should prove a success, that is, if the public should demand the book in large numbers, it would be unfair to allow any printer who so desired to print cheap copies and circulate them by selling at a comparatively low price, thus preventing the author from receiving the reward due to his labor.

These monopolies are rightly limited in time, however. For it is manifestly unfair that a man's heirs in perpetuity should keep on receiving a reward for the

deeds of their ancestor. It is not only the inventor or author himself who must be protected, however. The inventor may be quite willing to forego any rights of his own. Herbert Spencer, the great philosopher, found this out through personal experience. He was a lover of music and was annoyed at the unsatisfactory clips on the music stands which he used. So he invented one of his own which proved perfectly satisfactory. He did not want to make any money out of the idea, but when he tried to find a manufacturer to produce the clip so that other music lovers could avoid a similar annoyance, he found that the manufacturer insisted on a patent being taken out. If there were no patent, the manufacturer claimed that he would not be able to gain a reasonable profit on the risk that he ran, for should the clip prove a failure the loss would be all his own, and should it prove a success other manufacturers would step in and take away a great part of his sales.

Trade Marks — Another form of monopoly is worth mentioning before we treat of the form to which the term is commonly applied. Governments in most countries provide for the exclusive use of trade marks. The owner of a trade mark has the sole use of that particular sign with which to mark his goods. This is a protection to him and is very rightly given as such. If a firm has spent a great deal of trouble building up a business which is recognized as a sound one, in producing goods which win popular approval, or has gone to great expense in advertising these goods, it is hardly fair that it should be deprived of the fruits of that labor and expense. In order to distinguish its goods

from those sold by competitors, a firm marks those goods by some distinguishing sign or name, by which they become well known as the reputation of the producer grows. If there were no provision for copyrighting the distinguishing sign, other merchants or manufacturers might use it for their own productions and thus sell goods to consumers on the reputation gained by their more successful competitor.

A soap company, for example, may manufacture a soap which they call "Imperial." If the public decides that this is a good soap they will buy it steadily, and gradually the name will become familiar as representing a desirable variety. Realizing that consumers are in the habit of asking for "Imperial" soap another manufacturer might label his production "Imperial" also and so sell large quantities to those who thought they were getting the goods manufactured by his rival. This is so manifestly unfair that trade marks may be registered and copyrighted, and the owners are protected against the use of their trade mark or one so similar as to be easily confused with it.

This form of exclusive use, however, is not true monopoly. For while the Imperial Soap Company has the exclusive right to the use of the word "Imperial" it has no exclusive right to the manufacture of soap. Competition still exists and the Imperial Soap must take its chance with the Regal and the Republican and all the other possible brands.

Monopoly of Location — Nor is the sole right to have a store in a certain district rightly to be construed as a monopoly. It is true that it eliminates a certain amount of competition, but the effect of competition

from outside the monopoly district is bound to be felt. If this particular store charges too high a price, its customers can go outside the district for their goods.

If the area be so wide, however, that it is extremely difficult for customers to go outside, then the monopoly tends to be more absolute. This is because it has a better control of price-making. It can raise its prices with less likelihood of customers buying elsewhere. Now in every one of the cases we have taken, it is obvious that what is being sought is this very power of fixing prices *without being subjected to competition*. This is the essence of monopoly. But there is more to be considered before we are able to give a clear-cut definition. Even if the power to fix prices independently of the law of supply and demand exists for a time, that time will be limited unless there is a certain minimum of control of production, as well as of distribution of the monopoly goods.

Necessity of Control of Production and Distribution — If there is no control of production, but only of distribution, there cannot be permanent control of price-fixing, as far as the distributors are concerned, for the producers may so raise their prices that the profits of high retail prices will not be reaped by the distributors. In order that the monopoly should have a chance of real success, there should be some measure of control of production also. In this way there is a unity which the purely distributing side could not possess. This has been felt in a great many of the monopolies which exist at present. The steel monopoly, for example, means not merely the control of the selling

of steel, but also the more or less absolute control of the ore beds, of the rolling mills, and of the railroads.

Definition of Monopoly — This qualification, however, merely emphasizes the nature of the control necessary before those engaged in a business can have the power to exercise definite control over price. We may, therefore, define a monopoly as a business group which has such unity of producing and distributing organization as gives it power to fix prices without reference to competition.

It is the aim of every monopoly so to charge for the goods it produces as to reap the maximum profit. This does not necessarily mean an increase in price. It may happen, for example, that the greatest profit can be obtained by selling large quantities at comparatively low prices. The cost of production for a monopoly organization should be, and often is, less than that of competing manufacturers. In competitive production there is commonly a great deal of waste, both of effort and material. This is evidenced by the fact that in many cases, upon the formation of a monopoly, several of the former competing plants have been shut down without any lessening of the supply of the product. Before the formation of the monopoly organization most of the factories had been working at somewhat less than their capacity. When the monopoly was formed all the factories actually engaged in producing were working at full capacity, while the less efficient were shut down.

With this economy of production, therefore, it is possible for the monopoly to charge lower prices and still reap a greater total profit than that gained by the

competing firms. It does not follow, however, that the monopoly is satisfied with such a gain. If it can obtain higher profits by increasing the prices, prices will be increased. It is claimed for the Standard Oil Company that the prices charged for oil under its organization are less than formerly. This is probably true. But since the formation of the Standard Oil Company there have been many improvements in the method of manufacturing fuel and illuminating oil, and the probability is, that if competition still existed the price would be considerably lower than that charged by the Standard Oil Company.

Factors in Determination of Monopoly Price — The problem of fixing a monopoly price is not simple. There are many factors to be considered. The nature of the demand for the particular commodity must first be dealt with. If the demand is very intense it may be possible to fix a high price. Too high a price, however, will in any case reduce demand. The operators who made a famous "corner" in copper discovered this to their cost. For a short time they gained absolute control of the supply of copper, and at once raised the price to such a level that the consumers simply ceased to consume copper. There were no buyers. The corner collapsed in consequence, for the operators could not control the necessary capital to hold on long enough. Had they been satisfied with a more moderate price, they might have made immense profits.

Latent Competition — A very high price, long maintained, encourages competition. It is true that if the monopoly is sufficiently strong it may crush such com-

petition, but only at the expense of temporarily reducing prices. Therefore what may be termed latent competition has an influence on the price fixed by the monopoly.

Elasticity of Demand — Apart from the ever-present possibility of competition, the important factor to be considered is the nature of the demand. Some commodities have a very wide demand, as, for example, those which are of everyday use. In these cases, the greatest profit is gained through the widest possible sale. This means a comparatively low price. In the case of the manufacture and sale of soap a very high price will cause a large falling off in sales. To sell soap for, say, a dollar a cake, may be perfectly possible if the monopoly is strong. But at that price a great many possible buyers will decide to do without soap and regard it as an expensive luxury. Reduce the price to twenty-five cents a cake and the sales will multiply much more than fourfold. If we assume, as we may quite safely, that the increased purchases amount to ten times those at the higher price we may estimate the profits made. Suppose the cost of a cake of soap is ten cents to the manufacturer, inclusive of all distributing costs. The profit on the sale of one cake is ninety cents, at the price of one dollar a cake. But the profits made by selling ten cakes at twenty-five cents amount to one dollar and a half.

It must also be noted that almost invariably the unit cost of production is lessened when the quantity produced is increased. So we safely reason that in the case of the reduced sale at a high price the cost of the single cake of soap is considerably higher than

when the larger quantity is produced for the wide market at twenty-five cents.

It would seem, therefore, that in such cases the tendency of a scientifically conducted monopoly would be to lower, rather than to increase prices. Few monopolies are so scientifically conducted, however, and even where prices have been lowered, as we have already said, the prices are probably not as low as they would be under competition, provided the production and distribution were efficiently managed. In other words, the facts in regard to monopoly prices support the common belief that monopoly price is synonymous with high price.

NOTE. In this chapter the word *production*, as distinguished from *distribution*, is used in the ordinary colloquial sense, and not with the meaning given to the term by earlier definition. Of course, speaking accurately, distribution is a form of production.

CHAPTER XIII

THE EVOLUTION OF MONEY

One of the most difficult facts for students to remember in connection with problems of exchange is that all commerce consists merely in the exchange of goods or services for goods or services, that is, in the exchange of utilities. We speak so commonly of exchanging money for goods that we are inclined to forget that money is merely an intermediary in the matter of exchange. When we buy a pound of butter at a grocery store we pay, let us say, sixty cents. The sixty cents are then used by the grocer to buy, possibly, a pound of meat. In reality what has happened is that there has been an exchange of butter for meat. Money has intervened to facilitate the transaction.

In order to obtain a clear idea of the nature of money it will be well to study the simple transactions before money was invented. Every schoolboy has taken part in such transactions, for money, as a rule, is a scarce commodity with schoolboys, although exchanges are common enough. In these transactions it is perfectly obvious that the exchange is one of goods alone, with no intermediary. A knife is traded for a baseball bat, which may in turn be traded for a bird's nest with a few eggs in it, or for a supply of foreign stamps or some such article. The problems to be solved are comparatively simple as the number of exchange-

able commodities is small. In this respect the school-boy's commerce is not unlike that of primitive man. In primitive times few articles were produced which were subject to exchange, and hence exchanges could readily take place, although with some difficulty. This difficulty can be seen in a modern instance.

Problems of Barter Exchange — The advertisement columns of almost any newspaper will show that some one is desirous of exchanging an automobile for a city lot. Let us suppose that some individual, whom we will call John Smith, wishes to exchange his machine for a city lot. He must first find some other person who has a city lot which he wishes to get rid of. There is never much difficulty in finding such an individual. But it is not every lot-owner who will be satisfactory. He must not only be willing to dispose of his lot, but he must want an automobile in exchange. This reduces the number of lot-owners who can deal with John Smith. Still further the city lot must be one which Smith considers equal to or greater in value than his automobile and the owner of the lot must be satisfied with Smith's machine. With each condition to be satisfied there is a corresponding reduction in the number of people who can trade with Smith.

Every transaction of this sort, which is called *barter*, is subject to all the difficulties mentioned. To carry out our modern commerce on this basis is obviously impossible. Even in the cases advertised in the newspapers, the probability is that when the settlement is arrived at, there is a balance in money paid by one or the other of the parties. Now, when money did not exist, the exchange had to be kept to the two articles

and to them alone. Suppose an Indian makes a specialty of producing arrowheads. He must exchange most of those he makes for food or clothing or shelter. Probably he takes in exchange some furs from animals caught by the hunter, who desires a fresh supply of arrowheads. It is quite conceivable, however, that the arrow maker has sufficient furs for his needs and wants something else, say a new supply of dried buffalo-meat. If the hunter cannot offer this meat, the exchange will not take place. This leaves both hunter and arrow maker unsatisfied. Obviously, what is required is some commodity which is desired by every one.

Cattle Used as Money — In primitive times this one commodity existed, just as it does to-day, although it is not the same commodity. Food was wanted by all, and any one who possessed a store greater than he needed for his own use could always exchange some of his surplus for other articles. The form which this commodity took was usually the living cattle. Prices were made in terms of head of cattle. To show how intimately the cattle form of money is connected with our earlier stages of development, it is sufficient to consider the etymology of some of our money terms. The word "cattle," for example, is derived from the Latin, *caput*, a head. The word "chattel" is of similar origin, and so is the term "capital" which is so closely associated in common language with money. Again the Latin word for a flock or herd is *pecus*, from which is derived the Latin for money, *pecunia*.

Another word which commonly denotes a payment of money is the word "fee," which is derived from the Anglo-Saxon *feoh*, meaning either cattle or money.

Other etymological illustrations might be given from other languages, all pointing to the same elementary fact, but the above will be sufficient.

Other Forms of Money — Apart from articles of food, those which are desirable for purposes of clothing or ornament have been used as money. In the early years of the colonization of America, skins were commonly used for the purpose of exchange, just as they were, apparently, among the Israelites. The well-known quotation from Job, *skin for skin, yea, all that a man hath will he give for his life*, seems to indicate that skins were used in facilitating exchange. The American Indians used strings of beads, or *wampum* belts, as money. The list of articles which have been so used is almost inexhaustible, including feathers, furs, oil, fruits, shells, grain, and so forth.

All these different articles were not uniformly satisfactory for the purpose of exchange. Each involved certain difficulties, and we can best appreciate these difficulties by enumerating the qualities which are necessary for a good money material.

The Qualities Desirable in a Money Material.

1. *Value in Use* — Of absolute importance is the necessity that such money material should have a value in use, apart from its value as a means of exchange or a measure of value. All the articles named above possess this quality. Cattle, grain, oil are useful for food; furs and skins, for clothing; beads, shells, feathers, for ornament. This quality is essential, but there are many forms of goods which, although they possess the quality of satisfying some desire, are not fit for purposes of exchange.

2. *Universal Acceptability* — The second quality is that of *universal acceptability*. It is not sufficient for one or two persons to desire the article. It must be desired by every one. If a professor of geology were to write an article for a geological magazine and the editor offered him, in payment, an extremely rare fossil, it is probable that the geologist would willingly accept it. But if that professor offered the fossil to the plumber for repairing the plumbing in his bathroom, there is little doubt as to the attitude the plumber would take. In primitive times the payment would be made in one of the articles we have named, or something similar.

3. *Divisibility* — All exchanges are not of the same magnitude, however. It might still be possible to use a herd of cows in payment for part of a ranch, for instance. But if cattle were the only money substance it would be very difficult to buy a box of candy, or to pay for a street-car ride. These are extreme instances, of course, but the principle is important. To be really satisfactory, the money commodity should be capable of being divided into small portions for small exchanges. It must, therefore, possess the quality of divisibility.

There are many substances which possess all of the above attributes and yet which lack another necessity of a good money commodity. In regard to the last-mentioned quality — divisibility — there are difficulties with certain easily divisible objects. Precious stones have sometimes been used as money, and every one knows that precious stones are divisible. But in dividing a stone we lose some of its value. If we take a ten carat diamond, for example, and divide it into

two diamonds of five carats each, the value of the two diamonds together will not equal that of the original stone from which they were cut. Size itself is an element in the value of the precious stone. In order to be satisfactory, therefore, the commodity should not only be divisible, but should not suffer any loss in value by being divided.

4. *Homogeneity* — Another difficulty arises in connection with the use of certain substances which can be divided. In the case of skin-money, for example, it is quite possible to cut the skin into two parts, each of which weighs half of the original skin. But the value of one part is not the same as that of another. The half which contains the head may be used as an ornament; at least, some people consider the stuffed head of an animal an ornament. The other half is practically worthless. Again, in the case of dead cattle, if the animal is so divided that one part containing most of the bones weighs as much as the other part containing most of the meat, the values of the two parts are by no means equal. This is also the case with the living cattle. A buyer will try to pay with the poorest of his herds and a seller will stipulate for the fattest of the animals. Indeed the laws of old Egypt expressly stated that thin cattle would not be accepted in payment of taxes. Government, even in those early times, knew enough not to accept cheap money. From this difficulty we see that another quality is necessary in the material to be used as money. It must be homogeneous. That is, it must lose nothing of its characteristics by being divided into small portions. One part by weight should be exactly equal to

another part of the same weight. And not only so, but when a piece of the material is divided into two equal parts, the sum of the values of the parts should equal the value of the original piece. Precious stones are undoubtedly homogeneous. A diamond is simply a piece of crystalline carbon and it does not cease to be so when cut into smaller pieces. But as size is an element in its value it cannot be used satisfactorily.

5. *Portability* — The next quality which we find to be desirable is that of portability. Some forms of goods which answer satisfactorily all of the requirements enumerated so far are unsatisfactory in that they can only be transported at comparatively great expense. It is true that cattle may be regarded as portable in that they carry themselves, but they do not do so without expense. The further they have to be transported the greater is the cost in time for their care, and in food for their support on the journey. Hence if the cattle are to be used as a payment for goods bought from some person who lives a considerable distance away, the expense of transportation may be so great as to make the purchase not worth while.

Even some of the early forms of metallic money were not free from this defect. At the present time, as we shall see in a later chapter, gold itself is expensive to transport, and the cost of transportation has a material influence upon the value of the metal.

6. *Durability* — If we suppose that a herd of cattle has been accepted in payment of a certain purchase and has to be transported for a distance before reaching the seller of the goods, there may be more difficulties encountered than even the expense of feeding and caring

for the cattle on the journey. If they have to traverse a country which has only sparse pasture or in which water is lacking, it is quite possible that the cattle will deteriorate very greatly during the journey. Some will die and will be worth practically nothing even if the carcasses can be carried to the end of the journey. Again, if eggs happen to be the money material and any length of time elapses between the bargain and the payment, it is quite within the bounds of possibility that the eggs will lose in flavor before they reach their final owner. A quality to be desired in our money commodity, therefore, is that of durability without loss of value.

There is no commodity which is absolutely durable, in the sense that it cannot wear out. But there are undoubted degrees of durability, and if one commodity satisfies most of the requirements for use as money and is also fairly durable in use, it is so much the more to be desired.

7. Stability — Then there arises the question of the stability of value of the commodity. We have already shown some of the influences which are exerted in the determination of value, and of those influences one of the most important is that of supply. Other things being equal, we may say that the greater the supply the less is the value of the commodity. Now, if the supply of a commodity varies within wide limits, the probability is that its value will also vary. A money commodity is used not only as a means of exchange, but also as a measure of value. For the sake of simplicity we are accustomed to estimate the values of different goods according to the amount of the money

commodity for which they will be exchanged. If the money commodity is constantly fluctuating in value itself, it becomes almost useless as a measure of value. Suppose we use wheat as the money material. One day the worth of a bushel of wheat may be represented as a couple of pounds of butter or five pounds of coffee or half a dozen watermelons. Now if we say that two pounds of butter are worth a bushel of wheat we are stating the price of butter in terms of wheat. If the value of wheat, owing to a sudden increase in the available supply, suddenly falls, the exchanges will not take place in the same ratio. Hence two pounds of butter will no longer be equal in value to a bushel of wheat; they will be greater. Similarly the values of the coffee and melons will be altered when stated in terms of wheat. Hence it is always advisable to choose a commodity which does not vary much in value from time to time.

8. *Cognizability* — The final quality which we shall consider as an element in the money material is that of cognizability. The money should be easily recognized for what it is without any undue investigation into its character. A little thought on the conditions of our present money supply will show the reasonableness of this requirement. We become at once suspicious of any money with which we are not familiar. The familiar money we know and can recognize; the unfamiliar we must scrutinize carefully. There are parts of the United States where the use of coined money is much greater than in others where paper equivalents are more frequently seen. The paper is scrutinized more carefully in those districts where its

use is not so frequent than in those where it is common, and vice versa.

Before we consider what is the basis of the modern money materials it will be well to sum up in tabulated form the requirements of a perfect money material.

1. Commodity Value
2. Acceptability
3. Divisibility
4. Homogeneity
5. Portability
6. Durability
7. Stability
8. Cognizability

Metals as Money — Of all substances which have been used at different times as money the metals possess the above attributes in the greatest degree. At all times the metals have been desired for their own value apart from any uses as measures of value or means of exchange. At first, probably, they were used as ornament, and later on came their use in industry and for weapons of war. There was hardly ever a time when metals were not generally acceptable. They possess the quality of divisibility, without loss of value, in a high degree. A piece of copper which weighs a pound is of the same value as two pieces which weigh half a pound each. And one piece of copper is exactly the same as another piece of the same weight. It is homogeneous. The metals are portable also, with comparatively small expense. It is true that to use the older Greek iron money for modern payments and with our present valuation of iron, would involve high

costs for transportation of any considerable sum. That would not hold good in the days of iron money, for its value was much greater then than now. The metals are exceptionally durable also, although there are, of course, variations in their degrees of durability. Iron money is not so durable as copper if continually exposed to the elements. Copper on the other hand will wear out by friction quicker than iron. Gold and silver also are soft metals and liable to lose by constant use some of their weight. No commodity is permanently durable, however, and consequently all we can ask is a comparatively high degree of durability, and that is possessed generally by the metals. Again it may be said that no material is absolutely stable in value. But the fluctuations of metals are, taking everything into consideration, less than most other materials. Finally, especially in primitive times, the metals were easily recognized.

Remedies for Defects in Metallic Money — It is in the last three qualities that the metals are least satisfactory, especially the common money metals, gold, silver, and copper. But much can be done to remedy their defects in these respects. In regard to durability, for example, while it is true that gold is particularly liable, when pure, to loss from friction in use, it can be made much less so by the admixture of a small proportion of cheaper metal, without thereby losing much in value. The alloys of gold are much harder and so less liable to loss from wear than is pure gold. The same is true of the other metals. Hence we do not, in our coinage, use pure gold or pure copper.

Coined Money — The greatest advantage of our modern coined money is, however, its cognizability. There are many cheap imitations of gold and of silver which might easily pass with the unsophisticated for the real article. Even in America people have been known to accept “gold bricks” in the belief that they were pure gold. This fact of the possible imitation and also the variations in the amount of “base” metal used in the alloys have made it necessary that there should be some indication, on the metal itself, of the nature of its purity.

The development of the imprinting of some stamp on the surface of a piece of metal, by some person whose reputation was good, has resulted in the evolution of the modern coin. Originally, probably some king or duke or other person in authority placed his seal on the flat piece of metal, thereby indicating that it was of standard purity. The seal would not, at first, cover the entire surface of the piece of metal, and partly through wear and tear, and partly through the efforts of early economically minded merchants, the surplus metal outside the seal would tend to be gradually removed, and before long the shape would approximate to that of the seal. In order to avoid such loss by clipping, at any rate, the habit grew of making the metal the same size and shape as the seal, and as the ultimate shape of any flat piece of metal, constantly used, tends to be circular, so these pieces of metal came to be made circular. In order to prevent filing of the edges the latter were “milled” or some design was stamped upon them so that any attempts at filing would be obvious.

Definition of a Coin — Now all this work placed on the metal was made necessary only by the desire to make it cognizable for what it purported to be, that is, a piece of metal of a standard weight and fineness. And that is all that a coin is. To define a coin, then, we may say that it is a piece of metal upon whose surfaces have been placed stamps or designs by some one in authority, the designs indicating that the metal is of a certain weight and purity. Because it is shaped in this way it does not lose its characteristics as a commodity. It is essential that these should still exist in order to satisfy the requirements which we have studied in the earlier part of this chapter.

Debasement of Coinage — It is obviously of great importance that the stamp placed upon the coin should be placed by a person whose reputation is good. No one would place any reliance upon the certificate of value issued by an unknown merchant. It might be good, but, on the other hand, it might not. In feudal times the right of coinage rested in the hands of the feudal barons, except when the king retained the sole right himself. Unfortunately for the subjects, the king did not always justify their faith in his certificates. Just as it is possible for a commercial company to cheat the public by selling adulterated goods, at least for a certain time, so was it possible for kings to adulterate their money, by increasing the proportion of base metal in the coin. There would appear to be a certain advantage to the king in so doing, in that he seemed to be getting a coin which was of greater value as a coin than as metal. But the advantage was only temporary, and its consequences were serious to the people who

were compelled to use the coinage, especially if they were poor. It soon becomes known if the coins are being depreciated, and the more intelligent merchants then realize that the commodity value has been reduced and hence the ratio at which they will exchange their goods for this money decreases. If a certain coin of full fineness is worth a bushel of wheat, then the coin which is not of full fineness will not be accepted in payment of a whole bushel. If the coin is sufficiently depreciated, it will buy only half a bushel. But as the name of the coin, whether it be crown, noble, pound, or dollar, remains the same, the number of coins to be paid for the bushel of wheat is now two. In other words, the *price* of wheat has been doubled. And the case is similar with other commodities.

Effects of Depreciated Coinage — The effect of a depreciation in the coinage, therefore, is at first a rise in prices. But if the amount of depreciation is not the same with each coin, the tendency arises for the stamp on the coin to be disregarded entirely and the coin is accepted by merchants only upon an assay, and then by weight of the pure metal calculated according to the results of the assay. Even the government itself sometimes refused to accept at face value for taxes the coinage in circulation. At one period of English history, when the coinage was considerably debased, the face value of the coins was ignored by the government tax collectors. When the sheriffs brought to the exchequer the sacks of coin in payment of the tax levies on their districts, the actual commodity value of the coinage was tested by an assay of a sample of the coins. Part of the sacks of coin was tested and

the whole of the sacks averaged according to the results of the assay. The bulk was then weighed and the taxes paid by the weight of gold contained in the sacks.

The merchants who received payments in large amounts, received payment by weight and not by "tale," that is, by nominal value. The poorer classes were compelled to receive their payments of wages by tale and, as the depreciation caused increase of prices, the actual amount of goods that they received as a return for their services (what we shall later term "real wages") was very much reduced.

CHAPTER XIV

SOME MONEY PROBLEMS

Seigniorage — The coinage of money is not conducted without expense. In the feudal days, when the right of coinage was confined to the lord of the manor, or the seignior, it was customary for the latter to charge a certain amount to pay for the cost of turning the metal into coins. This charge, which varied according to the greed or generosity of the seignior, ranged from a bare charge sufficient to cover expenses to as much as the people could be forced to pay. Such a charge is known as *seigniorage*. At the present time in some countries it is still the custom to charge seigniorage. In others the government bears the whole of the cost. The latter is the case in the United States. In cities where no mint exists, it is customary, however, to charge a small percentage of the value of the gold to cover the cost of assaying the gold. In England one ounce of gold makes coinage to the extent of £3-17-10½. The Bank of England, which supplies all the gold to the mint, is allowed to buy gold at £3-17-9. The difference of three cents (one and one-half pence) an ounce compensates the bank for the loss of interest on its expenditure for gold, for a certain time must elapse before the gold coin can be turned out from the mint.

Gresham's Law — In the last chapter some of the difficulties in connection with a depreciation of the

coinage were indicated. In order to avoid these difficulties it is advisable always to keep the money at proper standard value; that is, the value of the metal as a commodity and as coin should be kept equal. Now in reforming the coinage some special difficulties always arise. One of these is of great importance, for it gives us one of the fundamental laws of money.

If there are two kinds of coinage in existence of different commodity value, but of the same nominal value, we shall always find that there is a tendency for the better class of money, the class which is of equal value as commodity and as coin, to go out of circulation. The reason for this is not difficult to appreciate. Suppose a merchant has a supply of what we may call "good" money on hand, coined into the same denominations as the bad money. He will be inclined to charge for his goods on the basis of the value of the depreciated coinage. If his good coins contain twenty per cent more pure gold than the bad ones, he will be inclined to sell the good coins to the goldsmiths as bullion, receiving in payment the bad coins. He will, of course, receive more money, nominally, than the coin value of the money he has sold. To put it in concrete figures, suppose he has one thousand dollars, nominally, in good money. This money he sells for its gold value to a goldsmith. But prices have gone up in terms of the bad money. He sells, as far as the goldsmith is concerned, not coins, but gold. The gold price, like anything else, stated in terms of the depreciated currency, has gone up. Hence the merchant receives twelve hundred dollars in the cheaper coinage for the gold coins he has sold to the goldsmith.

As practically every merchant is doing the same thing, in a comparatively short time there will be none of the good coinage left and all that remains in circulation will be the cheap money. Sir Thomas Gresham, who became Master of the Mint when Queen Elizabeth was reforming the debased coinage instituted by her venerable father, formulated this argument into what is now known as Gresham's Law. Stated briefly this law is that "Bad money drives out good." In other words, where there are two forms of money in circulation, the commodity value of one being greater than that of the other, there will be a tendency for the coinage of higher commodity value to go out of circulation, leaving the cheaper to be used in trade.

Subsidiary Coinage. Token Money — So far we have spoken as if the only coinage in circulation in any country consisted of one metal. We know, however, that there is more than one metal in circulation in the United States. We have gold coins, silver, nickel, and bronze. If the statement contained in Gresham's Law be true, how is it that the gold has not been driven out of circulation by the silver and the silver in turn by the nickel?

The reason is that we have, in reality, only one form of standard money. Consider for a moment the difficulties that would arise if all payments had to be made in gold. What sort of coin would we have to use to pay for a street-car ride? It would be so small as almost to require a microscope to see it. Gold, we have already noted, is divisible; but for very small purchases, considering the value of gold, gold is not suitable. Hence there must be some substitute. We

substitute silver and nickel for the purpose of making small payments. There is no relation between the value of the silver coins as silver and their value as coins. They obtain their value as coins from an entirely different source. According to our currency laws gold may be used in payments to any extent. If we offer coined gold eagles in payment of a debt within the country and the creditor refuses to accept them, the debt is canceled. But this is not true of the subsidiary silver and nickel coins. They are only to be used for payments of ten dollars or less. The creditor, for a sum greater than ten dollars, may refuse payment in silver coins.

How, then, do the subsidiary coins retain their face value in the smaller purchases? The United States Treasury is ready at any time to redeem silver and nickel and bronze coins, provided they are offered in amounts not less than twenty dollars' face value, in gold. In reality, such subsidiary coins are not true money. They are tokens of true money and hence are commonly known as token money. Their function is to facilitate small payments, and the law definitely restricts their use as money to the payment of small sums. Of course, there is nothing to prevent any one accepting subsidiary coins in payment of any sum if he so wishes, but the law does not compel him to accept them for sums over a certain amount.

Bimetallism — This brings us to a subject which has caused an immense amount of discussion in almost every country. Is it possible or desirable to use at one and the same time two different metals as standard money? It is beyond the scope of the present book to

consider this rather difficult question in detail. But it is worth while to point out the probable results of such an attempt, particularly as most experience shows that these probable results become actual in practice.

Suppose we use the two metals, silver and gold, and coin them into standard money. If, at the time of the coinage, an ounce of gold is worth fifteen ounces of silver, then the silver dollar must contain fifteen times as much metal, by weight, as the gold dollar. Everything will be satisfactory so long as the fluctuations in the value of the two metals, as compared with general commodities, follow one another in the same ratio. That is, there will be no difficulty if a rise of five per cent in the value of gold is accompanied by a rise of five per cent in the value of silver. But that is very seldom the case. The conditions which affect the value of gold have no direct bearing upon those which affect the value of silver. Hence before long the ratio of exchange of the two metals as commodities will change from fifteen to one, to, let us say, sixteen to one. In this case gold has evidently become more valuable. Gresham's Law will at once begin to operate to drive gold out of circulation. If the ratio change in the other direction, then silver will become comparatively more valuable than gold. Gresham's Law will then work to drive silver out of circulation and leave the gold.

Position of Silver Dollars — Now it is true that the silver dollars which circulate in this country are standard money as far as the law is concerned. They are legal tender for any amount. As a matter of fact, however, there are so few in circulation, comparatively,

at any rate, that they do not affect the gold coinage. The principle of having two metals both standard for coinage purposes is known as bimetallism. A full discussion of the subject, however, is too difficult for an elementary work like the present.

United States Currency — There are other forms of money which must be considered, however, besides the metallic coinage. At the present time the currency of the United States consists, besides token money, of gold and silver, gold and silver certificates, Treasury Notes, Greenbacks, National Bank Notes, Federal Reserve Notes, Federal Reserve Bank Notes, and a few other forms which need not be enumerated. All this paper money has an important place in the currency supply of the country. With the different forms of bank notes we shall be concerned later, when the banking system has been considered. In the meantime it must be noted that these forms of paper money all depend for their value on the possibility of their redemption in standard money. In regard to the greenbacks, for instance, we have a definite promise of the government to pay on demand to any holder of a note the sum stated on that note *in gold*. As long as the government stands ready to fulfill its promise there is no difficulty in keeping the greenbacks up to par; that is, in maintaining the face value of the note at the same value as that of gold of the same denomination. The same is true of the bank notes. Provision is made, as we shall see later, for redeeming these notes in gold at the will of the holder. These notes are properly termed credit money, as their value is based on the credit of the issuing body, whether

government or bank, or the belief that these bodies will fulfill their promises.

Money and Price — We are now ready to consider the relation between money and prices. In an earlier chapter it was stated that price is merely another word for value in terms of money. Value is the ratio at which one commodity exchanges for another. Price is the ratio at which a commodity exchanges for money. But money is itself a commodity, or represents a commodity. Hence price is merely a suitable term for estimating value.

In our résumé of the qualities necessary for a good money commodity we found that stability of value was one of the most important. Now no commodity is absolutely stable. Money is perhaps more stable than most other commodities, but it fluctuates considerably. The value of gold, for instance, will depend to a very large extent upon the supply available and the demand for it. The demand for gold is not simple, however. It is at least twofold. There is the demand for gold for use in the arts. Jewelers, goldsmiths, and dentists require a certain amount of gold for their business. Gold is also demanded for the purpose of making coins. The more gold taken for coinage, the less there is available for the jewelers and dentists, and vice versa. Sudden changes in the production of gold naturally affect the supply and hence the value also. The discovery of gold in California, Australia, and Alaska all affected very seriously the value of gold. What influence has this upon prices?

In discussing this question it must be remembered

very carefully that money supply is not the only question to be considered in the determination of the price of any particular commodity. There must also be taken into account the fluctuations in demand and supply of the different commodities and all the other influences which help to determine their price. In the present discussion, therefore, it must be understood that *the phrase "other things being equal" is of the utmost importance.*

Relation of Gold Supply to Prices — The amount of wheat which exchanges for five dollars in gold varies with the amount of wheat and the amount of gold in the market. Assuming that the amount of wheat and the demand for it are unchanged, then the effect of an increase in the supply of gold will be to increase the price of wheat. The increase in the supply of gold means a fall in its value. Hence five dollars in gold is not worth the amount of wheat for which it formerly exchanged. The wheat owner will therefore demand more gold for his wheat. In other words the price of his wheat will increase. The reverse will be true should the supply of gold decrease.

The fluctuations in the supply of gold are very considerable and, if we depended entirely upon gold for our currency, we should find a much greater fluctuation in prices than actually is due to currency changes. As we have seen, we have supplemented the currency from many different sources and as some of these sources are elastic, they may be used to counteract the effects of fluctuations in the value of gold.

To follow the effects of the supply of money on price we shall first consider the question of actual coin circu-

lation. Let us suppose that there is a community of ten men, each doing business with all the others. And let us further suppose that each carries out the same number of transactions, and that the supply of coins is one gold piece. It is quite possible that this one gold piece is sufficient to pay for all the transactions, if it moves quickly enough. A pays to B, who passes the coin to C, who again hands the coin over, until finally it reaches A once more. This means, however, that A must wait until the tenth man, J, has received the coin before he can be paid himself. Quite possibly one of the men may be anxious to gain the coin quickly in order to make an additional purchase. If D, for instance, wants to receive the money before C gets it, he may probably be able to do so, by offering more for the coin to B than C is willing to offer. C, therefore, must raise his offer to B in order to anticipate D. Hence prices will tend to fall very considerably. Now suppose we increase the amount of coinage by adding one other coin. If the same number of transactions is carried out the coins will not have to pass from hand to hand with the same rapidity as formerly. If, when there was only one coin, the whole of the transactions were completed in half a day, the individual coin changed hands ten times in that period. Now, when there are two coins, the individual coin only changes hands five times in half a day.

If we suppose that the number of transactions doubles, we may consider two alternatives. Either the same number of coins is used and the rate of change from hand to hand, or the rapidity of circulation, is doubled, or else the number of coins is doubled and the

old rate of circulation maintained. In either of these cases there will be obviously no change in price due to the amount of money.

If the number of coins and the rate of circulation remain unchanged, then as the number of transactions increases there will be an increasing intensity of demand for the coins and hence a fall in prices. If, on the other hand, the number of coins increases without a corresponding increase in the number of transactions, there will either be a decrease in the rapidity of circulation or an increase in prices.

The whole of this argument may be expressed in the form of an equation. Let P equal price, generally; that is, not the price of any particular article, but an average of general prices. Let M represent the amount of money in circulation and V the velocity with which it circulates. Finally, let T equal the number of transactions in the same period for which we have estimated the amount of money in circulation. The equation may then be stated as follows:

$$P = \frac{M \times V}{T}.$$

This equation, however, will not quite accurately represent the facts without a little alteration. Money functions are performed by instruments which are not, strictly speaking, to be regarded as money. Bank notes, government notes, token money, checks, and so forth, all perform currency functions, and hence they must be taken into account. That is, in our conception of money for the purposes of this discussion, we must consider also the presence of currency other than

standard money and its velocity of circulation. We may, therefore, amend the equation to read like this :

$$P = \frac{MV + M'V'}{T}$$

where M' equals currency other than standard money, and V' its velocity of circulation.

From this equation it will readily be seen that any increase in the denominator of the fraction, without a corresponding increase in the numerator, will mean a fall in price, and any increase in the numerator, without a corresponding increase in the denominator, will cause a rise in price.

Fluctuations in the Demand for Currency — We have already seen that it is of great importance in commerce for price to be as little affected by fluctuations in the supply and velocity of circulation of currency as possible. But there always is a fluctuation in the number of commercial transactions. There are definite seasonal fluctuations which occur with almost absolute regularity. These fluctuations are due in a large degree to the fact that crops are harvested usually only once a year and are sold as soon as possible after the harvest. There are other causes with which we need not deal. We are concerned merely with the fact that the fluctuations in the number of transactions exist.

In order, therefore, to make prices as stable as possible, there ought to be provision for a corresponding fluctuation in one or more of the factors in the numerator of our fraction. If we consider these factors for a moment, we shall see that such fluctuation, in practice, must be limited to the pair of factors introduced

in our second equation. The amount of standard money is dependent almost entirely upon the supply of gold. Sudden increases and decreases in this supply are not to be looked for. The amount of standard money in circulation should be regarded as more or less constant, or stationary. Moreover, there are limitations to the possibilities of increase and decrease in velocity of circulation.

Elastic Currency — Hence such fluctuations as actually take place must occur in the supply of subsidiary currency, *i.e.*, in the supply of bank notes, government paper money, checks, and so on. This argument will help to emphasize the importance of a properly elastic currency and the care which is necessary in evolving a satisfactory system of bank-note issues.

If we are able so to arrange the amount of currency and its velocity of circulation that it increases just in proportion as the number of commercial transactions increases, and decreases as the transactions decrease, we shall have achieved an almost perfect currency system. Unfortunately, in practice it is extremely difficult to do so. Increase is easy, but decrease in the amount of currency is harder to obtain. The government, for instance, can always issue a supply of paper currency based upon the credit of the country. Such currency is known as fiat money. The difficulty is in the retirement of that currency when it is no longer needed. The ease with which the issue can be made has resulted in constant attempts in one country after another to manufacture paper money for the needs of government. It was done in this country at the

time of the Civil War. But perhaps the best illustration of the effects can be given from the experience of France at the time of the Revolution.

Effects of Issue of Fiat Money — At that period the revolutionary government confiscated the lands of the nobility and clergy. On the security of these lands, the government issued paper money, known as *assignats*. The commerce of the country did not demand any increase in the currency, and hence the immediate effect was a rise in prices. With the rise in prices, the money issued by the government bought less goods. But the apparent value of the lands, expressed in terms of the new money, was increased. Hence the government felt justified in issuing more paper, with similar results. Finally the money depreciated in value so greatly that it was hardly worth the paper on which it was printed.

A similar effect would be seen at present in this country, if the practice of using Liberty Loan Bonds as currency were to spread to any great extent. The Liberty Loan is based on the credit of the United States. It is not based upon the number of commercial transactions, and the currency needs of the country are supplied from totally different sources. So, just to the extent that these loans are used as money, they will adversely affect prices. Of course, in this case the government is not responsible for such use of the bonds. The government of this country has already had its experience of a paper currency unrelated to the currency needs of the country, and has no desire to repeat that experience.

Currency Inflation — When the currency of a country is arbitrarily increased by the issue of money which is

not related to the commercial requirements, there is said to be money inflation, or inflation of the currency. It is almost axiomatic that money inflation is to be avoided. The reasons will be obvious to the student from the preceding argument.

Measurement of Prices. Index Numbers — One question naturally arises from the foregoing discussion. How are we to measure prices so that we can see the influence of money upon price? There are so many influences upon prices, some affecting one commodity, and some another, that it would appear to be almost impossible to extricate one particular influence. The method adopted is the use of what are known as *index numbers*. There are many methods of constructing these index numbers, and in the present work we can do no more than indicate the general principle upon which they are based.

What is desired is some method of showing the changes in the purchasing power of money. The method, stated very simply, is as follows :

A certain period is taken as a standard. The varying amounts of a series of different, but important, commodities purchasable for one dollar are listed. Each of these amounts is then numbered 100. The amounts purchasable for one dollar in the period to be compared with the standard period are then listed and again numbered according to their percentage of the amount purchasable in the standard period. The average of the percentage thus obtained will constitute the index number for the new period. That is, it will represent the comparative purchasing power of one dollar in this period.

The idea is well illustrated by a table compiled by Professor Seager.¹

JANUARY 1, FIRST YEAR

JANUARY 1, SECOND YEAR

\$1 — 1 bushel wheat	— 100	\$1 — $\frac{3}{4}$ bushel wheat	— 75
\$1 — $\frac{1}{5}$ ton coal	— 100	\$1 — $\frac{1}{4}$ ton coal	— 125
\$1 — $\frac{1}{20}$ ton iron	— 100	\$1 — $\frac{1}{10}$ ton iron	— 200
\$1 — 20 yards cloth	— 100	\$1 — 25 yards cloth	— 125
\$1 — 10 pounds copper	— <u>100</u>	\$1 — 5 pounds copper	— <u>50</u>
\$5	500	\$5	575
Average \$1	— 100	Average \$1	— 115

From this it appears that on the average the purchasing price of one dollar has increased fifteen per cent. By taking a large number of commodities this average increase in purchasing power is made more accurate. In the compilation of these index numbers, it must always be remembered that all commodities are not of the same importance. It would not do to take, for example, diamonds, orchids, and violins as sample commodities.

The difficulty is met by taking commodities which have a very wide sale and then “weighting” them according to their importance. That is, an important article, like wheat, for instance, may be enumerated three times, while a comparatively unimportant one would only appear once.

¹*Principles of Economics*, p. 376.

CHAPTER XV

THE EVOLUTION OF THE BANKING SYSTEM

One of the most important elements of human character upon the existence of which the modern economic structure rests is general honesty. If we did not implicitly believe that in the main every individual is fundamentally honest, there would be no possibility for the vast commercial transactions which continually take place to-day.

Honesty the Basis of Economic Structure — Credit is the basis of business, and at bottom, credit is nothing more than a belief that an individual will carry out his part of a contract. In the strict interpretation of the word credit, as applied to business operations, we may state that a credit transaction involves a promise to pay money at some future date. That is, there is a contract one part of which is to be fulfilled at a future date. Now, unless contracts such as these were habitually fulfilled at the appointed time, there would be no possibility of conducting business. Nevertheless, although it is true that there is a general belief in human honesty, that is no reason why precautions should not be taken to prevent evil resulting through occasional failures to live up to the general reputation. Credit must be organized. In the organization of credit the banks play the most important part. In fact the main function of the banking business is to organize credit.

We can conceive of the business of transportation being carried on as it is in some parts of Spain, for instance, by the use of springless carts with solid wooden wheels, creaking and jolting along the bad road. But we know that if we, in this country, had to depend upon such vehicles the greater part of our commerce must cease. Our wheels must be lubricated; our vehicles must be more efficiently designed; the physical force of the human body must give place to the forces of nature organized and subdued to human will. There is a vast difference between the creaking wooden wheels of the primitive oxcart and the ball-bearings of the modern automobile.

Banks the Lubricants of Commerce — Just as we have progressed infinitely from the primitive means of transport to the modern, so have we also progressed from primitive conditions of barter-exchange to the modern system of a complicated money and credit organization. The banks may be regarded as the lubricants of trade. Trade, indeed, could exist without banks. But it would creak and jolt like the ungreased wheels of an oxcart. The banks smooth the progress of trade; they make possible transactions of vast amounts between people widely separated. The average individual seldom realizes to what extent the comforts and graces of his own life are dependent upon the existence of a good banking system.

Essentially, the principles of banking are not new. Credit instruments, inscribed upon burnt bricks, have been discovered in the ruins of ancient Assyria. But our modern banks, no matter what similarities they may show to ancient prototypes, have not been de-

veloped from them. There is a more definite development to be observed from the period of the discovery of the New World. Without going into history too deeply, we may summarize the development of the banking institutions while gaining some idea of the functions which the banks exercise.

Beginning of the Deposit System — Consider, for a moment, the position of a medieval merchant who desired a safe place to keep his money, which was entirely composed of coin or bullion. He seldom had a proper place to keep the money, and yet thieves were even more common then than now, in spite of the greater severity of the laws. One kind of merchant was compelled by the nature of his business to have a strong place in which to keep his merchandise. That was the goldsmith. The materials of his business were at the same time the materials of which money was made. What could be more natural, therefore, than the suggestion that the goldsmith be asked to care for the surplus money of the other merchants? For a small percentage of the sum cared for, the goldsmith was willing to keep the money in his own vaults, safe, as far as anything could be safe in those days, from the attacks of thieves. The merchant could draw out his money as he pleased, and it was worth while for him to pay a little to the goldsmith for guarding the money.

But the goldsmith, being the merchant who had the greatest store of money material, was also the individual to whom borrowers naturally applied for loans. From these two facts we can develop the beginning of a banking system. The merchants who left their money

with the goldsmith for safekeeping were the original depositors. Those who borrowed from the goldsmith correspond to our present-day bank clients.

It would occur, sooner or later, to the goldsmith, that he was seldom called upon to return, at any one time, the whole of the sums deposited with him. There would appear to be no reason why he should not use some of these deposited funds to lend to his clients, thus reaping interest from both depositors and borrowers. But this could not be kept secret indefinitely. Competition among the goldsmiths for deposits which they could lend out would soon convince the depositors that their money was not always intact in the goldsmith's vaults. Competition would also lead to the solicitation of deposits backed by offers to receive such deposits and care for them without charge, and even, later on, to pay a small rate of interest to the depositor. We have here two of the chief functions of a bank — the deposit of money and the lending of money. It is but a little step to the third of these functions, the issue of bank notes.

Bank Notes. Origin — Money was subject to considerable difficulty in transport. It was liable to theft very easily. An order on a banker, however, or on a goldsmith could be carried easily, and if stolen, need involve no loss, for the order could be made payable only to a certain definite individual. Such orders, checks we call them now, soon became fairly common. Indeed, they were not unknown in ancient Rome. A merchant who wished to make a payment to another at a distance could obtain from a goldsmith an order upon another goldsmith residing at the place where

payment was to be made. He could then forward that order to his creditor, who obtained the money from the goldsmith upon whom the order was drawn. Similarly this second goldsmith could issue orders upon the first. The cross transactions would tend to cancel one another and any balances could be carried out by the actual transfer of gold. This would only have to be done occasionally, however, and the goldsmiths would be in the habit of taking extraordinary precautions in such shipments.

An order upon a goldsmith of recognized standing would soon tend to be regarded as equivalent to cash and consequently would be passed from hand to hand as such. The orders, therefore, might be outstanding for a considerable time before they were presented for final payment. The goldsmith, in the meantime, would be able to lend out the funds against which the orders were drawn and so obtain additional profit from the interest gained from the loan. Hence he would be anxious to have as many of these orders outstanding as possible. The natural result was that he issued his own orders drawn upon his own funds. These were rather promises to pay than orders. They consisted of a promise to pay the bearer on demand the sum named in the note. This is all that a bank note is at present.

The Deposit System — Essentially we have now all the elements of a bank. But a bank is somewhat more complicated than this and we shall now attempt an analysis of the functions indicated above. First, let us consider the deposit system. Let us imagine that there exists a community of ten merchants, who keep

of cash will be required. The merchants themselves, for instance, will require some funds for small purchases, like traveling expenses, for which checks are seldom used. They will, therefore, call upon the bank to pay back a certain amount of their deposits when they require such funds. The bank must be prepared to meet these demands, and therefore it will be compelled to have a certain amount of actual money ready to hand over the counter. Again it is possible that one of the merchants may give up business and leave the town, in which case he will withdraw all his funds. The bank must be ready to pay back at any time. But it may safely reckon on the fact that the amount of withdrawals in any one day will represent only a small fraction of the total amount deposited. If, therefore, the bank maintains sufficient funds on hand to meet what demands arise, it may use the remainder for the purpose of making loans. The amount of reserve, as these cash funds are called, will vary according to conditions of trade, but there will always be a surplus available for loans. The bank, then, protects its depositors' immediate needs by a reserve of cash and makes its profits by extending loans to its customers. The more nearly its depositors comprise all the merchants of the community, the smaller will the reserve fund need to be.

The Case of Two or More Banks.—Now we may return to the case of two or more institutions. Suppose there are two banks, each with five depositors, A, B, C, D, E, and F, G, H, I, and J respectively. Now if A pays a check to B, B will deposit it in A's own bank, and so the transaction will be similar

to that already described, *i.e.*, a bookkeeping operation within the bank. But suppose A, instead of drawing his check in favor of B, makes it out to F. In this case F will deposit the check in his own bank. That bank must then collect the money from the other. It is possible that to do so a messenger will be sent from the second bank to the first, carrying the check with him and receiving cash from the teller at the first bank.

But A's check is not the only one that will be drawn in the course of the day. H may draw a check in favor of C, who will deposit it in bank number one. This bank will, possibly, also send a messenger, carrying the check for payment to the second bank. It is conceivable, therefore, that the two messengers may pass each other in the street carrying money from the two banks.

This is obviously a waste of currency. It would be better for each of the banks to wait until the end of the day and then find out how much money each owes the other, settling the balance in cash. This would be perfectly simple in the case of two institutions, but in any large city there are many more banks than two, and the difficulty of balancing up each day is, consequently, much greater. Still the essential principle is the same, though the mechanism is a little more complicated.

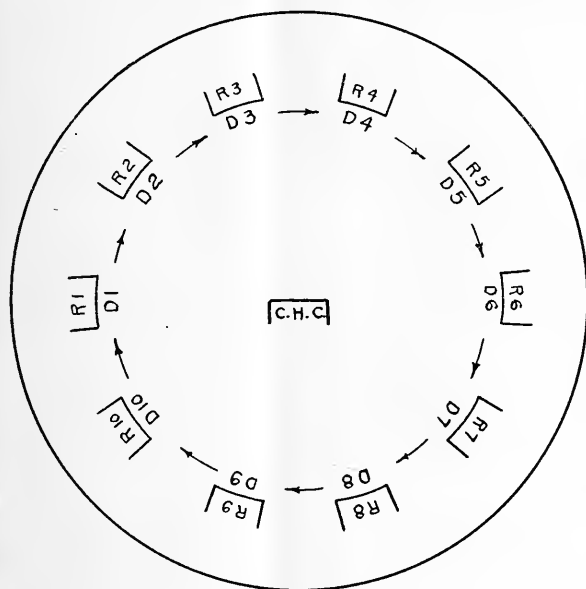
The Clearing House — Let us suppose that, in a certain city, there are ten banks. These banks will form a "clearing house association" for the purpose of balancing their indebtedness each day. Each bank will be numbered. At the close of the day the checks

received in each of the banks will be arranged into groups. The first group will consist of checks drawn upon the bank in which they were deposited. These will be cared for by bookkeeping transfers in the bank itself. The remaining nine will each consist of checks drawn upon one bank. The first will have all checks drawn upon bank number two, the next all checks drawn on bank number three, and so on. These checks will be wrapped up in separate bundles after the total amount represented on their face has been checked.

At a certain definite time next morning two messengers will be sent to the clearing house, carrying with them the bundles of checks. They carry also a statement showing the amount drawn upon each of the other banks and the total amount due from all. The clearing house will be illustrated better by reference to the diagram (Fig. 6). At a central table sits the clerk of the clearing house. Around this table are grouped in a circle ten desks, each assigned to a particular bank. On arrival at the clearing house, one of the messengers hands to the clerk of the clearing house a copy of the statement of the amounts due to his bank. The other messenger takes his place at the desk allotted to his bank. The first messenger carries the nine bundles of checks, each bearing a slip stating the amount due upon the checks in the bundle. He also takes his position at the desk belonging to his bank. Before the signal to commence operations, each desk will be attended, therefore, by two messengers. At a given signal, usually the striking of a bell, the messenger from bank number one will start for the desk of bank number two. There he will deposit the bundle of

checks drawn upon that bank, receiving a receipt for the amount stated on the slip. He will then pass on

FIG.6-Diagram to Illustrate Clearing House Method.



C. H. C. - CLEARING HOUSE CLERK.
 R - RECEIVING MESSENGER,
 D - DELIVERING MESSENGER.

to the desk of bank number three and repeat the performance. Meanwhile the messenger from the tenth

bank will have handed a bundle to the messenger at the desk of the first, then proceeding to the second desk. So the messengers will circulate until each has passed in his nine bundles and returned to his own bank, bearing nine initialed slips which constitute receipts for the bundles of checks handed over.

Debtor and Creditor Banks — The receiving messengers have occupied themselves in totaling the amounts stated on the bundles handed to them. They know, of course, how much is due to their own banks, from the statement brought with them. When they have completed the new total they are able to draw a balance between the two. If they find that the amount due from the other banks, as represented in their first statement, is greater than the amount due from their own bank, as shown in the total which they have just calculated, the balance is in favor of their own bank, which is known, for the day, as a creditor bank. If, on the other hand, the statement which was made up by their own bookkeepers is less than the total of the bundles of checks drawn upon their bank, then their bank is a debtor.

Obviously all banks cannot be debtor, or all creditor. The amount of the debits must equal that of the credits. If the amounts do not agree, some one has made a mistake, whereupon each clerk makes a recast of his totals to find the error. Meanwhile, the clerk of the clearing house has also made his comparison from the statements handed to him before the opening of the clearing. From these statements he prepares a summary of all the transactions, and has, at the end, a statement which should agree with the

combined calculations of the messengers from the member banks.

The balances are paid either in cash, or, sometimes, by checks. Thus the use of money is economized to an enormous extent. Without the clearing house, the use of checks in payment of commercial transactions would be very greatly curtailed.

The Bank Loan — So far, we have dealt only with the deposit system, but we have not considered an extremely important, indeed, an essential function of the bank — the lending of money. A bank's profits depend upon the quantity of successful loans made. They consist almost entirely of the interest charged for these loans. A loan may be made in three forms. The borrower may receive government currency over the counter, or he may receive bank notes of the lending bank. The greatest amount of loans, however, is made in the form of a deposit. Let us see why this is. Suppose a borrower obtains a loan from the bank amounting to \$10,000. It is conceivable that the bank may pay him in gold. But the borrower seldom requires the whole amount of the loan immediately. He wants to be able to have sums from time to time as required. He will naturally, therefore, want a safe place to keep the money until the time comes to spend it. What safer place can he have than the bank? Consequently, having received the coin, he deposits it to his credit, and draws checks against the deposit.

The gold, therefore, will be paid out by the paying teller and carried to the receiving teller's window and there deposited. This means that the gold will have passed out at one window and in at another. There

is no reason why the transaction could not be done by entering the amount of the loan directly into the pass-book of the depositor, who is also the borrower. This, in fact, is what actually happens. When the borrower negotiates the loan with the bank, instead of receiving currency in any form, he has the amount of the loan credited to him and he then uses the account to draw checks with which to make his payments.

Accommodation Loans — We may divide the purposes for which loans are made by banks into three classes. First, there are those loans which are purely for the purpose of accommodating the borrower. The reason why the borrower wants the money is not apparent. He may wish to take a trip to Europe, or to buy an automobile, or to redecorate his house, or any of a multitude of different methods of spending. Loans of this type are known as accommodation loans, and the notes signed as evidence of the obligation are called accommodation paper. This type of loan was extremely common in earlier history. A good example is that contained in *The Merchant of Venice*. Bassanio, in borrowing money from Antonio, merely desired to make a brave show when he went to court Portia.

Capital Loans — The second type is that secured by borrowers who wish to add to their working capital. If a firm, for instance, has spent all its present capital in the purchase of buildings and machinery, and requires additional funds to provide for the working expenses of the business before the returns begin to come in, it frequently negotiates a loan with a bank. The first type of loan is usually made not on the credit of the borrower, but on the value of security deposited

with the bank. A pawnbroker's loans are of this type. The second may be made either on security offered, or on the credit of the borrower. If the bank believes that the borrower has sufficient capital already invested in his business to make it pay, and that he is a capable and honest business man, the loan may be made without any security other than this belief.

Commercial Loan — The third type of loan is obtained for the purpose of facilitating commercial operations, the purchase and sale of goods. Let us suppose that a merchant has sold a thousand dollars' worth of dry goods. He gives, let us say, thirty days' credit. That means that for thirty days he must wait before receiving payment. Most likely he will find that some time during that thirty days he could make good use of the money. If he cannot obtain it, profits, otherwise possible, will be lost. He therefore goes to the bank and obtains a loan on the strength of the money due to him at the end of thirty days. Frequently, and much more so of late years, the debtor will sign some form of obligation, agreeing to make the payment at the maturity of the credit period. This obligation will be indorsed by the creditor and handed to the bank. The latter then becomes the legal owner of the sum mentioned at the maturity, and the retail dry goods merchant will pay the sum stated on the note to the banker when it is presented.

Discount — The merchant to whom the money was originally due will receive from the bank a sum slightly less than the amount called for in the note, the difference being the banker's profit on the transaction. Such a loan is usually referred to as a discount. The

bank "discounts" the note indorsed by the merchant to whom the money is due. This particular type of loan is called a commercial loan from the nature of the transaction on which it is based. Its importance in the operations of commerce can hardly be exaggerated. Few retailers can afford to carry a stock sufficient for the needs of their customers, unless they are allowed a certain time to sell the goods before being called upon to pay the wholesale dealer from whom the goods were bought. If there were no possibility of discounting the evidences of indebtedness on the part of the retail dealers, the wholesale merchant would often be unable to give reasonable credit terms without curtailing the amount of business done. If there were no means of discounting, the loss would fall heavily upon the consumer, for higher prices would undoubtedly be the result. The merchants, having to wait for their money, would be compelled to ask higher prices from their customers, and these higher prices would inevitably be passed on to the consuming public.

Value of Discount System — The fact that the banks stand ready to discount commercial paper, therefore, allows the retailer a reasonable credit period, and at the same time permits the wholesale dealer and manufacturer to turn over their capital much oftener, thereby making possible greater production and a consequent increase in the total satisfaction gained by the community. It further provides for the full utilization of idle capital, for the increased production calls for greater working capital, and that greater capital is drawn from otherwise idle funds in the hands of bankers.

Bank Notes — The third of the banking functions is the issue of bank notes. A bank note is nothing more nor less than a promise on the part of a bank to pay a certain sum on demand in lawful currency. There is a technical similarity between an ordinary demand promissory note and a bank note. But the difference consists partly in the fact that the signature of the bank officials on the note is taken without question, whereas the signature of a private promissory note usually must bear investigation before it can be generally accepted, and partly in the fact the government regulates the issue of bank notes so as to protect holders, whereas the holders of ordinary promissory notes have only recourse to the provisions of the law governing negotiable instruments. The bank has an identity which differs from that of a private individual, in that it is regarded almost without question as a safe institution. In order that the reputation may be deserved, in every civilized country the methods of banking are subject to regulation by government. In our next chapter we shall consider the method of regulation adopted by the United States.

CHAPTER XVI

THE AMERICAN BANKING SYSTEM

I. THE NATIONAL BANKS

It is impossible in a brief outline to give anything like an adequate account of the banking systems in vogue in the United States. Hardly any system tried in any country has been without its example in American procedure. At best all that can be done here is to outline the essentials of the present system and leave the detailed study to texts on banking. We shall, therefore, neglect the consideration of the varieties of State institutions, merely remarking that with the exception of the note-issuing power they are not very dissimilar from the National banks, and confine our attention to the two outstanding institutions, the National banks and the Federal Reserve banks.

Early History — The early history of banking in the United States provided illustrations of the best and the worst forms of banks. Generally speaking, however, up to the time of the Civil War the banking conditions of the country, from whatever point they could be regarded, were unsatisfactory. The issuing of bank notes was uncontrolled and the notes varied in value according to the standing of the institution which issued them. The reserves maintained against deposits were in many cases totally inadequate. The

risks taken by the bankers in making loans were too highly flavored with speculation to be considered in any way sound banking.

The currency difficulties of the country at the time of the outbreak of war were not entirely due to the banking system, but they were intimately connected with it. Three problems, in this connection, faced the government. First, the country must be provided with a sound currency system. Second, the safety of the funds belonging to depositors must be guaranteed in a much more satisfactory manner than formerly. The third problem was not necessarily connected with the banking system but it influenced the design of the new system very materially. Funds were necessary for war purposes and, as these funds were to be obtained by the sale of government bonds, a market for these bonds had to be found. The government tried to solve all these problems by forming the National banking system.

National Banking Act — The Act which formed this system is known as the National Banking Act, and was passed in 1863. Since that time it has been frequently amended, but we shall not deal with the amendments separately. In principle, the Act may be briefly described as follows :

Minimum of Capital — The government issued charters to banking institutions which complied with the stipulations laid down in the Act. These institutions were compelled to possess a certain minimum of capital, which varied according to the number of the population served by the bank, but was not allowed to fall below \$25,000 in any place. In addition to the capital, each bank had to lay by a certain

portion of its profits each year to form a "surplus," until the surplus amounted to twenty per cent of the paid-up capital.

Bond Purchases and Note Issues — The smaller banks were to buy government bonds to the extent of one quarter of their paid-up capital, the larger banks buying a minimum of \$50,000 worth. By this it was hoped that the desired market for government bonds would be provided. Of course, it was not to be expected that the banks should be deprived of the use of so much of their capital, and so each bank was allowed to issue bank notes to the extent of, at first, ninety per cent, and later, one hundred per cent of the face value of the bonds. The bonds were held by the Treasury as security for the bank notes issued. In this way the security of the bank notes rested upon the credit of the federal government. Thus two of the problems were supposed to be solved.

Reserves — In regard to the third problem, the safeguarding of depositors, the Act laid down rules for the maintenance of minimum reserves, and directed the manner in which these reserves were to be kept. First, the banks of the country were divided into three classes. Those situated in New York, Chicago, and St. Louis were called *Central Reserve City banks*. Forty-nine other cities were named as Reserve cities. All National banks situated outside of these fifty cities were termed *Country banks*. The reserves required under the act varied according to the status of the bank. Central Reserve City banks were required to maintain minimum deposit reserves of twenty-five per cent of the total deposits, these reserves to be in cash carried in the vaults of the individual banks. The Reserve City banks were also required to maintain reserves of twenty-five per cent, but with this difference; in their case only twelve and a half per cent of the deposits need be kept in cash

carried in the vaults of the bank. The other half of the reserves might be left on demand deposit with a National bank in a Central Reserve city.

In the Country banks, a reserve of fifteen per cent had to be kept, six per cent being cash in vaults, and the remainder on deposit in Central Reserve or Reserve cities.

Bank Examinations — The business community was protected against unwise banking by prohibitions of certain forms of loans which were of too speculative a nature, and by a system of periodical examinations conducted by federal examiners. The Secretary of the Treasury might also call for reports as often as five times each year.

Criticism of the System — The system thus outlined was undoubtedly a very great improvement over that which had preceded it, but it did not really solve the problems which led to its adoption. In the first place, the market for government bonds was not very widely increased. There was no prohibition on the issue of bank notes by other institutions than National banks. It was assumed that the State banks, that is, the banks which operated under charters given by the States, as distinguished from federal charters, would flock to join the new system. Most of them, however, preferred to retain the more elastic procedure allowed under the State laws. To remedy this defect, an act was passed in 1865 which imposed a tax of ten per cent upon bank note issues other than those of National banks. This was not, in form, a direct prohibition, but in practice it amounted to such. The number of National banks immediately increased very greatly.

The provision of a market for bonds, however, was a minor and temporary consideration. The two important purposes of the act were to remedy the currency and to safeguard the depositors. Let us see how the provisions of the act succeeded in these respects.

National Bank Notes — A bank note is, as we have said in a previous chapter, merely a promise on the part of a bank to pay to bearer, on demand, the sum mentioned on the face of the note. If the bearer can always rely upon the fulfillment of the promise, the note issue is kept up to a par with the rest of the money of the country. The note must, therefore, be adequately secured. But there are two points of view to be considered in determining the security of the note — the ultimate and the immediate security. In regard to the ultimate security, provision must be made for the repayment of the face value of the note when the note is finally retired. In the case of the National bank note, that security is found in the deposit of government bonds with the Treasury of the United States. If a bank should fail, the bonds will be sold to pay the holders of the notes issued by the bankrupt institution. In case the bonds do not realize their own face value, the balance due to the note holders constitutes a first charge upon the assets of the bank. It would appear, therefore, that the note holders are adequately secured as far as the ultimate redemption of the notes is concerned.

Redemption of Notes — But there is a second point of view which is of almost greater importance. It is not sufficient that the ultimate security of the notes be protected. Their immediate redemption on de-

mand is a primary necessity. To satisfy this requirement, the Act provided that in addition to the bonds deposited with the Treasury, each bank must maintain a fund, in gold, amounting to five per cent of the notes issued, with the Secretary of the Treasury. From this fund notes were to be redeemed. Further, all National banks were compelled to accept National bank notes, no matter where issued, at face value as deposits.

Suppose the National City Bank of New York receives on deposit, \$5000 of notes issued by the First National Bank of San Francisco. The National City Bank will forward these notes to the Treasury and \$5000 will be transferred from the redemption fund belonging to the First National of San Francisco to that belonging to the National City Bank. The San Francisco bank will then be informed by the Treasury that \$5000 of its notes have been redeemed, and it will be instructed to replenish the fund to that extent. When this has been done, the notes are forwarded to San Francisco to be reissued. The Treasury, therefore, acts as a sort of clearing house for the note issues of the country.

National Notes as Currency — From the point of view of security, both ultimate and immediate, therefore, the National bank notes must be considered as perfectly satisfactory. But there is a further difficulty which was not so successfully met. In the previous chapter it was pointed out that the bank notes of a country formed the principal part of the elastic money material. If this elastic currency is to be satisfactory for the commercial needs of the country, it should expand

when the needs of commerce demand more currency; that is, when the commercial transactions become heavier and more numerous, and when conditions change, they should contract. It is doubtful if any currency system ever invented has perfectly satisfied this need. But the National bank notes certainly did not do so. This was due to the nature of their security.

To understand this, we must examine the nature of profits obtained by issuing bank notes, on the security of government bonds. First, there is the interest paid by the government on the bonds purchased by the banks. This was six per cent at first, but the bulk of the existing National bank notes is secured by two per cent bonds. Secondly, the notes are lent by the banks to borrowers, and the interest charged on the loans constitutes a part of the profits. Against these profits the expenses of the issue must be counted. These include the cost of issuing the notes, the federal tax on the issue (amounting to one half of one per cent on the notes secured by two per cent bonds), and some other expenses with which we need not deal. Subtracting these expenses from the gross profits, we obtain the net profits on the issue.

Perverse Elasticity — According to a calculation made recently the net profits made by a bank note issue, over and above the interest received on loans made (which would be received if cash had been lent instead of notes) amounted to about 1.2 per cent. This is a small amount, but it becomes important when business is slack. Hence, in times of depression when it is important that the banks, like every other business, must make every effort to secure profits, note

issues are increased in order to gain this extra interest. This means, therefore, an increased issue of notes. But the very fact that conditions are depressed is evidence itself of a smaller need for currency. So, instead of the currency being reduced as it should be, it is increased.

Again, when times are good and business is brisk, securities appreciate in value, and it may be profitable for the banks to sell their bonds to obtain the profit due to a sale at a higher price than was paid for the bonds. But the bonds cannot be sold without retiring the currency issued upon that security. Hence, the tendency is to sell the bonds and retire currency just at the period when business conditions suggest the advisability of increasing the currency. We may say, then, that National bank notes are not inelastic but perversely elastic, expanding when they should contract, and contracting when they should expand.

In spite of this very grave defect, however, the National bank notes have proved to be infinitely better than the wild issues which preceded them. We no longer find merchants making mathematical computations of the value of the notes received in payment for goods, on the basis of published schedules of varying cash values. The currency is sound, but not satisfactory.

The Reserve System — We must now turn to the reserve system under the National Banking Act. Of this we may say the same that has been already said in regard to the National bank notes — it is a great improvement over the older system, or lack of system, but it has, nevertheless, grave disadvantages. The question first arises as to the advisability of legal

control of the amount of reserves. It has often been argued that the bankers themselves are the best judges of the amount of reserves necessary for the adequate protection of the depositors. There is a very large amount of truth in this contention, but the answer to the argument is a complete justification of the system. The only way in which one can test the truth of the statement of the banker's ability to judge of reserves is by experience. In some countries (as in England, for example), experience has shown that if the decision as to the amount of reserves against deposits is left to the bankers, the margin of safety will seldom be overstepped. But American business men claim that English bankers are unprogressive and that they are too unwilling to take a chance. The last criticism cannot be urged against American bankers. On the contrary it may be said that the early bankers in the United States were too willing to take chances.

This is not to be wondered at. They lived in a new land, whose constantly unfolding promises of immense riches provided a continual incentive to new enterprises. It could hardly ever be foreseen whether a new enterprise would be a huge success or an equally colossal failure. Optimism abounded and the bankers shared in the general belief in almost impossible progress. The result was a strong tendency to extend credit beyond sound limits and thus leave depositors inadequately secured. As a first step towards rendering the banking system sound, therefore, the government had to take the decision as to the amount of reserve to be kept out of the hands of the bankers, and lay down a minimum below which they must not fall.

Defects of the System — Having decided upon the minimum, the next step in the process of establishing the system was to direct the manner in which the reserves should be kept. It is against this method adopted under the National Banking Act that most of the criticisms have been aimed. Broadly speaking, the reserves may be divided into two classes. There are first, the cash reserves held in the vaults of the individual banks. Secondly, there are the reserves deposited in the reserve cities and central reserve cities. To consider first the cash reserves we may use the simile suggested by one of the most important framers of the Federal Reserve Act. Suppose the fire protection system in a big department store were to consist of fire buckets, one or two buckets being placed in each room. And suppose, further, that in case of a fire starting in one room of the building, the only water supply available should be the two buckets in that room, the other buckets being used only when the fire had spread to the room in which they were situated. In such a case every one would admit that the fire protection was ridiculously inadequate, even if the total water in all the buckets were ample to extinguish a large fire. Yet this is what happens under the cash reserve system in the individual banks. Each bank in time of crisis hangs on to its little hoard of cash for the protection of its own creditors. In every crisis this protection has been inadequate, although the total cash resources of all the banks, properly applied, would have met all the needs.

But, it may be said, how does the deposited reserve affect the situation? This brings us to another con-

sideration. In the first case we are not sure that the deposited reserves actually exist. Suppose a country bank has \$50,000 of deposited reserves in a New York National bank. It is constantly drawing upon that reserve by selling drafts on New York. That is, the merchants in the town in which that country bank is situated in making payments to New York buy drafts from the bank. These drafts are nothing more nor less than checks drawn by that bank upon its deposit account with the New York institution. As fast as it draws those checks, and thus diminishes the deposit credit, it must build up the deposits to maintain the reserve amount. The deposits are renewed by paying into the New York bank checks which have been drawn upon some New York institution and paid into the country bank in question. These checks represent amounts paid by New York purchasers of goods sold by merchants living in the neighborhood of the country bank. Now it has been the habit of the country banks to consider the deposits as made as soon as the checks have been put in the mail box. The New York bank, however, would not credit the deposit account until it had received the checks, and it is possible that an interval of several days might elapse before the checks actually arrived. We have, therefore, two different statements as to the amount of reserve for this particular country bank. Let us assume that the \$50,000 has been reduced by half. The balance is placed in the mail box and, according to the accounts kept in the country bank, the deposited reserve is now back again at \$50,000. But the figures for that same reserve, if taken from the New York bank, would show

only a reserve of \$25,000 during the interval necessary for the transmission of the new deposits.

It is, therefore, doubtful if the deposited reserves are anything approaching the amount shown on the books of the depositing banks. If, however, we admit the existence of the deposits, we must also consider the fact of their availability. It is essential that these deposited reserves be withdrawable on demand. Consequently the banks which hold the reserves must so lend out the money that they can call the loans at any time. If they lend the money out on even ordinary commercial terms of fifteen, thirty, or sixty days, it is quite conceivable that they could not control the funds in case of a sudden demand for withdrawal. This fact, in its turn, limits the nature of the loan transactions, practically to one class — the stock exchange call loan.

The Call Loan System — In ordinary stock exchange transactions, the buyer of shares does not pay the whole of the sum for the purchase himself. He pays a margin, amounting, let us say, to ten per cent. The broker negotiates a loan with the bank on the security of the shares. In the case of a loan of \$100,000 the bank will probably require shares to the market value of at least \$110,000. The difference is to protect the bank against a possible fall in the value of the security. In case the loan is defaulted, the bank has the right to sell the security and it must be sure that the security will realize sufficient to pay for the amount of money originally loaned, together with the expenses of the transaction. These loans are made “at call.” That is, the bank has the right to ask for the payment of loan at any time. Thus, the deposited reserves of the

country are dependent, not upon the commercial security of the country, but upon the stability of the stock market, whose operations are more largely speculative than those of any other body.

In normal times there is no doubt that the reserve system worked fairly satisfactorily. But a good reserve system should not be dependent upon normal conditions. We do not ask for a fire protection system that works satisfactorily as long as the only fires that occur consist of the burning of waste-paper baskets. What is wanted is one which will take care of real fires. So in the case of a reserve system it must be judged by what it will do in times of crisis. And it is just in this respect that the National bank reserve system fails.

Reserves during Crisis — Consider what happens in a crisis. Whether that crisis be caused by a stock exchange panic (which may be due to the work of manipulators) or by general business depression, the effect is the same. The prices of stocks fall. Now as soon as there are indications of the approach of a crisis, the banks require to increase their store of cash reserves. To do this, they must call for the return of their deposited reserves. In order to repay the reserves, the central reserve city banks must call their loans. In order to repay these loans, it is necessary for the brokers to sell their stocks. This means, however, that the market is flooded with selling orders, with a consequent rapid and steady fall in prices. Some of the brokers are unable to meet their obligations. The banks, therefore, must sell the deposited stocks themselves. This in its turn increases the amount of

selling orders and still further depresses the price of the stocks. The margin of security (*i.e.*, the amount by which the security exceeded the amount of the loan) is soon wiped out and the stocks fall farther. Even if the banks can sell the stock, it is at a loss. The funds, therefore, are simply not available.

In a crisis the result of this reserve system is that the only reserves which are really available for use are the cash reserves in the vaults of the individual banks. To these cash reserves, the banks in the soundest condition hold on tenaciously. Those which are weaker find them quite insufficient, and so are compelled to suspend payments in order that their depositors may share equally in the total resources of the institution, and so equalize the loss.

The account given above is not theoretical only. It represents what has happened time and again in American commercial history. The greatest panic of the last hundred years occurred in 1907. The results of the weakness of the reserve system were then made so obvious that some improvement was seen to be absolutely essential. Hence from that year until 1913 investigations were made as to the best possible solution of the difficulty, and in 1913 Congress passed the Federal Reserve Act. How this new Act attempts to solve the problems arising out of the National banking system will be considered in the next chapter.

CHAPTER XVII

THE AMERICAN BANKING SYSTEM (continued)

THE FEDERAL RESERVE BANKS

We have seen in the previous chapter that the chief faults of the National banking system lay in the methods adopted for securing a sound currency and in the manner of keeping reserves. It was the task of those who framed the Federal Reserve Act to remedy those faults. In order to understand the remedies enacted it will be necessary to anticipate a discussion which will be dealt with more fully in a later chapter.

Control of Reserves by Individual Banks — The reserves act as a sort of last line of defense in a panic. If they do not remain strong enough to satisfy the demands for return of deposits, nothing is left but suspension and failure. Before the necessity of drawing upon reserves appears, however, banks can obtain funds in several ways. They can stop lending money, for instance. If there is time available for collecting funds before the demands are too great, this method is bound to build up funds. Let us see how this occurs. The bank profits depend upon the interest received for loans. But loans are not indefinite. They are always made for a specified time or else at call. If the bank stops lending money, therefore,

it has only to await the maturity of the loans already made for the funds to begin to accumulate. Some will mature almost immediately, others more slowly, but gradually all will mature, and if the loans have been carefully made, the bank ultimately will have all of its funds intact.

A sudden stoppage of loans, however, is bad from several different points of view. In the first place it is an indication of weakness on the part of the bank. Quite probably, therefore, it will bring about the very demands that it purposes to avoid. In the second place, it will result in serious inconvenience to business men who have been relying upon the possibility of obtaining loans for their commercial purposes. As we shall see later on, business is carried on mainly with borrowed money and a sudden stoppage of loans means a consequent sudden stoppage of business. Hence, from the point of view of the business man, such a sudden cessation of the power to borrow is to be avoided if it is at all possible.

Use of the Discount Rate — Instead of a sudden stoppage, however, the stoppage may be more gradual. This may be secured by raising the rate of discount. Suppose there are two men each of whom has an opportunity to make profitable use of a certain amount of capital, one expecting to gain seven per cent on the use of the capital and the other eight per cent. Now suppose, further, that each will borrow capital for the purpose of his transaction if he can secure a net return of four per cent. Finally let us suppose that the rate of discount is three per cent. This being the case, each can borrow the necessary capital,

paying three per cent for its use, one making a net profit of four per cent, and the other five. Now suppose the discount rate is raised to four per cent. In this case the man whose transaction will make a gross profit of seven per cent finds that if he borrows, his net returns will only be three per cent. By our hypothesis, however, that is too small a return to justify borrowing the capital. Hence he will not borrow. The other man, however, can still borrow and make his net profit of four per cent. The result of the rise in the discount rate, therefore, is to prevent one man from borrowing, without actually prohibiting him. One loan is made instead of two. This amounts, of course, to a gradual cessation of lending.

From the business point of view, this means that the more profitable investment is carried out and the less profitable prevented. It is assumed that the more profitable is that one which is most required by the community, and therefore, while there is a certain amount of restriction in business, that which the community feels is more valuable is maintained and only the less valuable elements are dropped.

This last argument must, of course, be interpreted very broadly, for there are many circumstances to be considered in estimating the value of a transaction to the public, besides the price the public is willing to pay.

In each of the foregoing arguments, however, we have assumed that all the banks were affected equally. This is seldom the case, however. There are times when one bank has opportunities of making satisfactory loans to a much greater extent than others.

Hence, we can often find instances where one bank in a particular district is compelled to refuse sound loans, while in another district there are banks which cannot find sufficient loans to employ their capital.

Rediscounts — The remedy in these cases is simple. The bank which has too many loans on hand may take some of the notes which it has already discounted but which are not yet mature, and discount them again. Suppose the First National Bank of Chicago has opportunities for more loans than it has available funds to supply. The reason it has no funds is obviously because it has already lent out its funds. The evidences of indebtedness, in the shape of discounted notes, drafts, etc., are still in the hands of the banks, and presumably will remain there until the loans mature. At the same time let us suppose that the Wells Fargo Nevada National Bank of San Francisco has funds for which there are no borrowers. There is nothing to prevent the First National of Chicago from discounting some of its notes with the Wells Fargo Nevada Bank. By so doing, the Chicago bank is able to satisfy its clients by means of the funds obtained, while the San Francisco bank has employed some of its surplus funds. This process is called "rediscounting." For some reason the process has not recommended itself to business men in America until recent years. They have assumed that a bank which rediscounts its "paper" is in a weak condition. There is nothing, however, to justify that assumption.

One of the great difficulties in the way of a satisfactory development of the system of rediscounting has been the lack of facility for bringing idle capital

to the place where it is needed. That is, in other words, there has been no "rediscount market." Had there been such a market, it is quite possible that the panics of the nineteenth century would not have been so severe as they were. At any rate, it may be remarked that nowhere in Europe, where the rediscount system is very highly developed, have panics been so severe as they have been in America.

The Federal Reserve Act—With this as preface, we may now turn to the actual provisions of the Federal Reserve Act. The Act is the result of a careful examination of the methods of banking in all the civilized countries. What has seemed adaptable to American circumstances and advisable from the point of view of American needs has been utilized in framing the Act. It starts out with an attempt at unifying the system. At the head of the system stands the Federal Reserve Board. This board consists of seven members, including the Secretary of the Treasury and the Comptroller of the Currency. The other five members are appointed by the President. The first duty of this board was to divide the country into twelve districts, called Federal Reserve districts. In each of these districts a Federal Reserve bank was established. The banks, however, although established by the federal government, do not belong to the government. Each National bank was compelled, under a penalty of losing its charter if it refused, to subscribe towards the capital of the Federal Reserve bank a sum amounting to six per cent of its capital and surplus. The directors of the banks are divided into three classes. In the first class are those who are appointed by the

Federal Reserve Board. These are three in number and include the president and vice-president. These directors act as representatives of the board, so that the central control is well established. Another three of the directors must be men engaged in banking business. The remaining three must not be engaged in any banking business, but must be representative business men of the community in which the bank is situated. The manner of electing the six local directors, as we may call them, is worth explaining. The banks in the Federal Reserve district which are members of the Federal Reserve system, that is, all the National banks in the district and those other banks and trust companies which have become members by complying with the necessary conditions, are listed in order of their capital. The list is then divided into three parts, each part containing the same number of banks. The first group has the privilege of electing one banker as a director, and one business man. The second and third have the same privilege. The reason for this mode of election is to insure the representation on the directorate of the Federal Reserve bank of the small and medium-sized banks as well as of the banks with large capital.

The profits of the bank are apportioned as under any other form of corporate organization, but dividends are limited to six per cent of the capital. If the profits earned are in excess of six per cent, the difference goes to the government.

The Reserve System — So much for the organization. We must now consider the principles upon which the system works, and we shall deal first with

the reserves. It will be remembered that the chief fault in the reserve system under the National Banking Act was that the reserves were scattered throughout the country as far as the cash was concerned, and that the deposited reserves were concentrated in the New York banks, where they were almost invariably loaned out on call and were therefore dependent upon the speculative activities rather than the purely commercial.

The Federal Reserve Act, as it is now, has changed somewhat from its original form, and there is no reason why we should spend time over the initial stages of development. Under the present form of the Act, the whole basis of the reserves has been changed. In the first place a distinction has been made between time and demand deposits. It is realized that when a banker may claim a certain amount of notice before being compelled to refund deposits, he does not need to maintain so large a reserve as if the deposits were withdrawable on demand. A decision had to be made, however, as to the exact meaning of the term time deposit as distinguished from demand. The distinction is bound to be arbitrary, of course, but the Federal Reserve Board has laid it down that deposits which a bank accepts on condition that it may exact thirty days' or more notice before refunding, are considered as time deposits. Those which may be withdrawn with less than thirty days' notice are demand deposits.

The old nomenclature of Central Reserve Cities, Reserve Cities, and Country Banks has been retained, but a change has been made in the proportions of

reserve against deposits. In central reserve cities a reserve of thirteen per cent must be maintained against demand deposits. In reserve cities the reserve minimum is ten per cent, while in country banks a minimum reserve of seven per cent is required against demand deposits. The proportion of reserve against time deposits is the same for all three classes, three per cent. A vital difference in the method of carrying the reserves must be noted, however. *Only sums on demand deposit with a Federal Reserve bank may be counted as reserve.* Cash in vaults is no longer recognized as a method of maintaining reserves. The Federal Reserve bank must maintain a cash reserve of thirty-five per cent against its deposits.

It will be noted that under this system the reserves of the country are centralized, but centralized in districts. Each Federal Reserve bank is the custodian of the reserves for the whole of the district in which it is situated (excepting, of course, the reserves of non-member banks). Now the business done by the Federal Reserve banks consists mainly in the buying of commercial paper. That is, the Federal Reserve banks are dependent upon commerce rather than upon speculation. This in itself is a valuable improvement.

The centralization of reserves, on a proper basis of commercial activity, remedies the defects which we saw in dealing with the National banks. We may no longer liken the reserve system to a fire system consisting of individual buckets only available in the rooms in which they are placed. Now it may be compared with a building in which there is a central tank, with pipes leading to all the rooms, the whole

force being available for a fire which breaks out in a single room. The tank, too, if we may continue the simile, is always full. The reserves in the Federal Reserve bank are real reserves and are available when required.

Rediscount Market — It is not necessary for the banks always to draw upon their reserves when they are called upon to refund money. The Federal Reserve system provides what was lacking in the older system, a rediscount market. Commercial paper may be rediscounted in the Federal Reserve bank provided it is not of longer maturity than ninety days. The expression "commercial paper" needs some definition. The primary transaction upon which all commerce rests is the purchase and sale of goods. When a merchant sells goods it is customary for a certain amount of credit to be given the customer, the length of credit varying with the nature of the business and the individual conditions of the transaction. Now the seller may not wish to lose the use of his capital during the life of the credit period. If he waits until the time is up before he receives his money, he cannot make any use of that money during the intermediate period. This means that he is acting as a banker to his customer and practically lending the customer the amount due for the length of the credit period.

In order to obtain the money before his customer pays for the goods, he negotiates a loan with the bank. The evidence of the loan, in the form of accepted draft or promissory note, is termed commercial paper. The varieties of the forms of commercial paper need not concern us here.

A note which is secured by the deposit of "collateral" in the shape of stocks and bonds, or by a real estate or chattel mortgage, is not considered commercial paper. Hence the notes which a stock broker signs when he obtains a loan on the security of the bonds which he deposits with the bank are not rediscountable at the Federal Reserve bank.

Now let us suppose that a certain National bank finds its reserves in the Federal Reserve bank are falling close to the minimum. It does not need to call in its loans, or to stop lending. All that is necessary is that the bank take some of the notes discounted by it previously and rediscount these with the Federal Reserve bank. The proceeds, instead of being received in cash, will be credited to the deposit account of the National bank, so increasing its reserve fund.

Crises and Panics — Now it is very important to realize that this process of rediscounting has a very great influence on the prevention of panics. Panics rise from many causes, but we may distinguish two important varieties. In the first place, there are panics which are purely the result of stock exchange movements which may be due to manipulations unconnected with the commercial prosperity of the country. The reserves, as we have seen, are not connected with stock exchange transactions. The more important cause of panics rests with the fluctuations of trade. Suppose a manufacturer sends out his salesman at the beginning of a certain year, and finds that at first orders come in slowly. Little by little, however, the orders increase. He begins to work his factory at full pressure. The orders continue to in-

crease in number and size. His factory works overtime. In order to obtain plentiful supplies of raw material, he obtains loans from the banks. The banks, seeing that business conditions are good and that the manufacturer has every reason to suppose that he will be able easily to sell the goods he makes, are perfectly willing to lend the sums necessary. The manufacturer, with this additional capital at his disposal, increases his production. There comes a time, however, when the orders are not so easily obtained, and he must encourage sales by dropping prices a little. But he is only one of many. Other manufacturers are going through a similar experience. Hence there is a tendency to reduce prices all round. Suddenly, one manufacturer realizes that if he is to repay the sums he has borrowed, he must sell at a loss. The market has become overstocked and goods can only be sold at a sacrifice. The banks, looking to the safety of their funds, begin to call loans. If the credit has been too far extended there is every possibility of business failures and a commercial panic. Under the former system of banking, the difficulty was to know exactly when credit was overextended, and when business conditions really justified increases in credit. Under the Federal Reserve system there is a definite commercial pulse, as it were, which can be felt from day to day.

The Discount Rate — The Federal Reserve banks, as we have said, must maintain a high reserve against their own deposits. If this reserve tends to fall toward the minimum, obviously rediscounts cannot be continued at the same rate. The simplest method to adopt

in order to cut down the amount of rediscounts is to raise the discount rate. Rediscounting will then be resorted to only by banks which really need funds. Those whose needs are not pressing will not rediscount. But the raising of the discount rate by the Federal Reserve bank is the signal for the raising of discount rates by the member banks. A fall in the reserves of the Federal Reserve bank, therefore, may be regarded as a sign of a tendency towards over-extension of credits. But as this fall is seen immediately, steps can be taken to curtail credits by raising rates, and so the incipient panic is checked.

Currency — The next important fault in the National banking system is the nature of the bank note currency. We have seen that this currency has no relation to the commercial needs of the country. It is based on the security of bonds deposited with the United States Treasury, and fluctuations in the value of the bonds affect the amount of notes in circulation. In order to secure a satisfactory currency, it is necessary that it be based upon the needs of commerce, increasing as the demands for currency increase and decreasing as the demands become less.

Federal Reserve Notes — Two new forms of currency paper are issued under the Federal Reserve Act, of which the more important are the Federal Reserve notes. These notes are based principally upon the commercial transactions of the country. Let us suppose that a merchant requires a loan from the bank of, say \$10,000. This loan is for the purpose of making payments in small amounts, for wages, petty expenses, and so forth. To obtain the loan in

the form of a deposit credit necessitates the payment of the wages, and so forth, by check. This is not a satisfactory method in many places, as the workmen who receive the wages are not in the habit of carrying bank accounts. It is much more convenient to receive the money in the form of bank notes or government currency. The merchant, therefore, asks for the loan in the form of bank notes. Now it is quite possible that the bank has not the requisite amount of currency on hand. It can obtain the notes, however, by rediscounting the merchant's note at the Federal Reserve bank, receiving the rediscount payment in the form of Federal Reserve notes. These notes are secured by a gold reserve of forty per cent of the amount issued and by the commercial paper rediscounted.

Of the forty per cent of gold, the Reserve bank cannot keep more than thirty-five per cent in its own vaults. Five per cent must be deposited with the Treasury to form a fund for the redemption of outstanding notes.

How far are these notes an improvement over the National bank notes? To answer this question we must look at the system from the points of view of (a) ultimate security, (b) immediate redemption, and (c) elasticity.

In regard to the first point, ultimate security, it can readily be seen that there need be no apprehension on the part of holders as to the security. In the first place, there is the fact that at least forty per cent of the issue is definitely secured by gold. The remainder is secured by commercial paper. We must examine, therefore, the value of such paper as security. The

commercial paper represents actual business transactions involving a necessity for currency. Before the banker makes the first loan he will scrutinize the transaction very carefully to see that there is every likelihood of the fund for repayment being accumulated during the life of the note. He only makes the loan when he is satisfied on this point. This means, then, that in the banker's opinion, a sound transaction in commerce is under way. It is possible, of course, that the transaction may fail; that the individual who owes the money may not be able to pay at maturity. In that case, the banker must have recourse to the resources of the borrower. The actual proportion of defaults on commercial notes is, however, very small. The chances of failure are less than one tenth of one per cent, *i.e.*, less than one in a thousand. But the note is secured by more than the promise of the original maker. When it is rediscounted the member bank must place its own indorsement on the note. The Federal Reserve bank is therefore secured by the promise of the member bank, in addition to that of the original maker of the note.

This reduces the possibilities of failure to a minimum. As far, then, as ultimate security is concerned, we may regard the Federal Reserve notes as being perfectly satisfactory. In regard to the immediate redemption, the same method is adopted as under the National bank system. A five per cent redemption fund, in gold, is maintained with the Treasury, and notes are cleared there in the same manner as are the National bank notes.

The issue of the Federal Reserve notes is controlled

by the Federal Reserve Board, through its representatives on the directorate of the Federal Reserve bank. The chairman and vice-chairman of the board of directors are known respectively as the Reserve Agent and Deputy-Reserve Agent. It is their duty to obtain from the Federal Reserve Board the Federal Reserve notes and to issue these to the Federal Reserve bank as required. The gold and commercial paper which secure these notes are placed in the care of the Reserve Agent, who must always see that the paper is of the kind designated by the Board as suitable for security and that the gold fund is kept up to the minimum required by the Act.

In the next chapter we shall consider the Federal Reserve notes from the point of view of an elastic currency.

CHAPTER XVIII

THE FEDERAL RESERVE SYSTEM (continued), WITH A NOTE ON THE CANADIAN BANKING SYSTEM

Elasticity of Currency — Let us imagine a transaction in the ordinary business of commerce. Suppose a merchant has sold \$10,000 worth of goods to one of his customers on the basis of thirty days' credit. The customer gives his note at thirty days in payment. The merchant discounts this note at the bank in order to obtain funds for the payment of ordinary current expenses in the way of wages, and so forth. He asks the bank for cash instead of deposit credit. In order to obtain the cash, the bank rediscounts the note with the Federal Reserve bank of the district and obtains Federal Reserve notes, which are paid over to the merchant. The note, upon which the loan is based, is now in the hands of the reserve agent of the Federal Reserve bank. The Federal Reserve notes are in general circulation. During the thirty days, which is the length of the credit period, the notes are continually passing from hand to hand. The customer, however, is gradually selling the goods, receiving in payment, we may suppose, Federal Reserve notes, which he deposits with his bank.

At the end of the thirty days, when the note is mature, the reserve agent calls upon the bank which indorsed the note to repay the loan. Usually, the

Federal Reserve bank will send the note to the member bank for collection. The member bank, thereupon, sends the note to the man who signed it originally, that is, the customer who has been selling the goods during the preceding thirty days. He pays the amount by drawing upon the money he has deposited in his bank. This money is represented, we may assume, by the Federal Reserve notes collected in payment for the goods. In turn these notes are handed to the bank, which then turns them over to the Federal Reserve bank. The Reserve bank, therefore, has received back the notes which it issued on the security of the commercial paper, and this, being paid, is now canceled. At the same time, the Reserve notes are also retired from circulation.

To sum up the whole transaction, therefore, we may say that the sale of the \$10,000 worth of goods gave rise to the provision of the amount of currency necessary to finance the operation. As soon as the sale is consummated, the goods in the hands of the ultimate consumers, and the payment received, the currency which was issued is canceled.

It must not be supposed, of course, that this transaction represents the actual facts of every case. Obviously the same identical notes which are issued by the Federal Reserve bank are not returned for final retirement. The actual process is a little more complicated, but essentially, the description given above represents the facts. With every issue of Federal Reserve notes, there is a corresponding amount of commercial paper. With every cancellation, by payment, of such commercial paper, there is a correspond-

ing retirement of Federal Reserve notes. This answers the criticism which has been leveled at the system by certain English writers — the criticism that the Federal Reserve notes represent inflation of the currency.

It must now be obvious that the issue of notes depends upon the existence of a commercial transaction which necessitates the currency, and that as soon as the commercial transaction is completed the notes are almost automatically retired. The system provides an elastic currency which fluctuates according to the needs of the community. The only point at which there is evidence of inflation is the fact that the Federal Reserve notes form an addition to the National bank circulation, and not a substitute for it. If the National bank circulation is left untouched, then it would appear that the total currency is increased by just the amount of Federal Reserve notes which are in circulation. It was the intention of those who designed the Federal Reserve Act, however, that the new currency should be a substitute for the National bank notes, and not an addition. Provisions had to be made, therefore, for the retirement of at least the greater part of the National bank notes.

Federal Reserve Bank Notes — Now, as we have already seen, the National bank notes are secured by the deposit of United States Bonds. We have also seen that one of the provisions of the National Banking Act compelled all National banks to purchase a certain amount of government bonds, whether they intended to issue notes or not. This provision was repealed by the Federal Reserve Act and so there is no reason why the National banks should issue cur-

rency. The currency cannot be retired, however, without selling the bonds which act as security for the issue. But the price of these bonds (which are mainly two per cent bonds) was only maintained at par because of the demand for them as security for note issues. Now that the reason for this demand has ceased, it would seem that the bonds would fall to their normal level for gilt-edged securities paying two per cent. This level is considerably below par. Therefore, unless a special market is provided for the sale of such bonds, the banks in self-defense will be compelled to maintain their issues until the maturity of the government bonds, for if they sold them, they would suffer considerable loss.

The Federal Reserve Act provides such a market in the following manner:

Any bank which wishes to retire part of its circulation may sell its bonds to the Federal Reserve Bank at par. The Federal Reserve banks are compelled to take not more than \$25,000,000 of these bonds each year. The total bond sales are proportioned among the twelve Federal Reserve banks.

It might, of course, involve the Federal Reserve banks in considerable loss if they were compelled to purchase bonds to this extent and tie up their capital. The Act, however, provides that, if they think fit, the Federal Reserve banks themselves may issue currency notes, which are termed Federal Reserve Bank notes, to distinguish them from Federal Reserve notes, against the security of the bonds so purchased. If, however, the Federal Reserve banks do not wish to insure currency on this basis, they may exchange the

bonds for three per cent gold bonds without the privilege of issue. The extra one per cent compensates the bank for the loss of the issue privilege.

The gold bonds received in exchange for the old two per cent bonds are divided into two classes. Half of them mature in thirty years. The other half mature in one year, but the Treasury has the right to renew them from year to year, but not for more than thirty years. In practice, very few of the Federal Reserve banks have issued notes based on the bond security, and the probability is that by the end of the thirty-year period the only bank notes in circulation will be the Federal Reserve notes.

Summary — We are now in a position to sum up the effects of the Federal Reserve Act. It has, in the first place, compromised between the idea of a National central institution and the entirely unrelated institutions which preceded it. There are now twelve banks which act as central banks for the different districts. In so doing, they provide a sort of clearing house for country checks and so extend the clearing house system beyond the limits of the cities. Still further to extend this system, the Federal Reserve Board itself acts as a clearing house for the whole of the country.

The reserves are placed upon a sounder basis and are entirely divorced from the speculative element in finance. They are based upon commercial operations entirely and this eliminates one of the factors in the production of commercial crises. The reserves are more economical to the institutions than under the old system, despite the fact that the Federal Reserve

banks do not pay any interest upon deposits, while the National banks were in the habit of paying, as a rule, two per cent interest upon bankers' deposits. To illustrate this, let us consider the case of a country bank whose deposits amount to \$100,000.

Under the National banking system the reserves to be maintained against this amount would be \$15,000. Of this amount, however, \$9,000 might be placed on demand deposit with a National bank in a central reserve city, and earn two per cent. The cost of keeping reserves may be estimated as the amount which the reserves would earn if placed out at interest at the prevailing rate. Let us suppose that, during the year, the average rate of interest earned is five per cent. The loss of interest on the \$6,000 cash reserve would be \$300. As the \$9,000 deposited reserves would earn interest at the rate of two per cent, the net loss is three per cent, or \$270, making a total net loss of \$570. The interest earned on the balance of \$85,000 deposits would be \$4,250.

Now under the Federal Reserve system, the first fact to be noticed is that a distinction is made between the demand and time deposits. On the average, a country bank has twice as much demand deposits as time. To be on the safe side, let us suppose that the deposits are divided into seventy per cent demand and thirty per cent time. Against the time deposits a reserve of three per cent is maintained. This amounts to \$900, the loss of interest on which, at five per cent, amounts to \$45. Against the demand deposits a reserve of seven per cent is kept, amounting, in this case, to \$4,900. The loss of interest on this sum

amounts to \$245, making a total net loss of \$290 as against \$570 under the National banking system. But the amount of earning deposits under the Federal Reserve system is \$94,200 as against \$85,000 under the National banking system. This means a possibility of net earning of \$4,710 instead of \$4,250.

In regard to economy of funds, therefore, the Federal Reserve system has very considerable advantage over the older method.

The currency system is much improved by the new Act. Instead of a currency which is, in spite of its soundness as far as par value is concerned, perversely elastic, we have a currency which is equally sound and yet directly elastic, in that it comes into existence only when commercial transactions demand the additional notes, and when those transactions are completed, the currency is almost automatically retired.

Perhaps the most important of all the improvements, however, lies in the definite establishment of a rediscount market. This enables the Federal Reserve Board to keep its finger upon the commercial pulse and to know when credit conditions are becoming unduly extended long before that extension assumes dangerous proportions.

The fact that the Federal Reserve Board may definitely stipulate what kind of paper it will accept for rediscount purposes renders it possible to educate business men into the use of the most satisfactory methods of financing their business.

Finally we must mention the method of control of the whole of the member banks. In the case of

a National bank, as we have seen, the government provided for periodical examination. This is done also under the Federal Reserve system, but the examinations are a little more stringent. Provision is made against what is known as "window dressing." Suppose a bank is ordered to report the state of its affairs on the sixth of June and receives the notice a month before that date. In the interval there is time for the bank to close out some of its weaker loans, strengthen its reserve, examine its collateral, and see that all securities represent sound values. By the time the date of the report arrives, the condition of the bank is such that it will present a very favorable report. This is avoided by the Federal Reserve Board asking for reports for a day which has already passed. Five reports are to be made each year and the Board may ask for these at its own convenience.

There is also an examination necessary before any new bank is admitted into the system, in order that only sound institutions shall be maintained.

In short, the United States has now a banking system which will compare with the best existing anywhere. It is, of course, not perfect but it represents a wonderful improvement upon that which preceded it. As to its actual working, the system has been in operation for too short a time to pronounce a definite verdict, but it may be said that up to the present the faults which have developed are comparatively insignificant and the system has stood a strain which financial institutions are very seldom called upon to stand.

NOTE ON THE CANADIAN BANKING SYSTEM

The banking system of Canada has long been recognized as exceptionally strong. It differs very materially from that of the United States, whether we consider the National banks or the Federal Reserve system. Canada has no great central bank, but, on the other hand, it does not have a great number of small, or comparatively small banks. There are about thirty banks in the Dominion which have received a government charter. These institutions have their headquarters usually in the city from which they receive their name. But they are represented throughout the country by great numbers of branches all in close connection with the parent institution. In this way, each of the parent banks acts as a sort of central institution in much the same way as the Federal Reserve bank acts in the United States.

The relation is even closer, however, for the central bank gives very close supervision to the acts of the branches, controls the reserves, and distributes the funds where they will do the most good. There is no reason why there should be idle funds while the business of the community shows the necessity for loans to be made. If business is dull where one branch is situated, other branches can make use of the spare funds. From the point of view of accounting, the system has the great advantage of a uniform method. Hence the statistics of banking are in a much more satisfactory condition than they are in the United States, although under the new organization in this country a much closer approach to stand-

ardization of method is possible now than under the old banking act.

The system of bank examinations in Canada is, or perhaps it is better to say was, much more strict than in our country. This was perhaps due in a large measure to the fact that the examiners are paid on a different basis from those who acted under the National Banking Act. Under the latter system the examiners were paid so much for each bank examined. Hence it was to their advantage to examine as many institutions as possible, and this tended to lax methods. In Canada the examiners receive a stated salary no matter how many banks they examine. A typical example of the difference in examinations may be mentioned. An American banker who had the opportunity of watching an examination conducted into the affairs of a branch of a Canadian bank in the United States, was amazed at the thoroughness with which every roll of coins was examined. In his own bank he had found it customary for the bank examiner to take the figure on the roll as representing the contents. The Canadian examiner opened every roll and counted every coin.

The Canadian banks are not unrelated to each other. The banks have formed an association which acts in a certain degree as the Treasury does for the National banks. The important function of this association is the clearing of the various issues of bank notes. The Canadian banks are not restricted in regard to the amount of notes which they may issue, and there are no bonds to be deposited as security. The notes themselves form a first lien upon the assets of

the bank. Every bank, however, is compelled to maintain a fund for the redemption of its notes. This fund, which amounts to five per cent of the circulation, is placed in the hands of the Minister of Finance. The association clears the notes which come up for redemption, and the ownership in the fund varies according to the amount which is presented for redemption.

In the case of the failure of a bank, its outstanding notes commence to bear interest at the rate of six per cent at once. Hence they are eagerly sought as an investment, and in a very short time pass out of circulation. The notes are redeemed from the central fund, no matter how small the amount owned by the defunct bank. The assets of the bank when realized must make good the amount paid out of the fund in excess of the five per cent placed originally by the bank.

The fact that each of the banks may possibly be called upon to supply a deficit in case the assets of the bankrupt institution are not sufficient to pay for the outstanding notes, gives each bank an interest in seeing that no institution over-issues its notes.

The actual control of the banks is left very largely in the hands of the bankers themselves, but experience has proved that in this case, at least, the bankers have justified the confidence placed in them by the government.

The difficulties which the National banks experienced in regard to the lack of an efficient rediscount system have not arisen in Canada, because of the branch system. The parent bank naturally acts as the re-

discounting bank, but with the advantage that there is no rediscount rate. Any branch bank which requires additional funds has merely to call upon its head office, which may withdraw funds unused by other branches.

CHAPTER XIX

THE NATURE AND MECHANISM OF TRADE

The Nature of Trade — It has been made abundantly clear in previous chapters that trade consists essentially in the exchange of goods and services for goods and services. It is necessary, however, to examine this proposition a little more closely than we have been able to up to the present. There are considerable difficulties involved in realizing that money is merely an intermediary and not a prime necessity. When a tailor makes a suit of clothes he expects to receive money in exchange for it. When the grocer renders his monthly bill, he expects to be paid in some form or other of money. When the workman has finished his weekly work he demands money in payment for that work. Money is, of necessity, so closely associated with the reward for labor, or the *quid pro quo* in an exchange, that it inevitably tends to be regarded as a good in itself. It is, of course, true that standard money is a good in itself in that it possesses a value as a commodity, apart from its value as a means of facilitating exchange. But the greater part of the money instruments in use to-day have no intrinsic commodity value.

It is so very difficult to realize in practice that a suit of clothes is worth, let us say, a week's work, or a six-hundred-mile railroad journey, that it is almost always

preferable to speak of it as being worth so many dollars. But when we say so many dollars we are obscuring the facts and not simplifying them. The apparently more difficult form of expression in terms of a week's work, or a journey by rail, is really more accurate.

When Tom Smith gives a week's work in return for \$25, he is really working for so much food, shelter, clothing, amusement, education, and so on. He cannot, of course, give part of his work to the clothier, another part to the house-builder, a third to the grocer, and so on. Or, at least, it is not readily apparent how he can do so. In reality he must give those who build his house and provide his food and clothing the results of his work. The function of trade is to facilitate this process.

We have already seen that each produces more of a certain requirement than is necessary for his own consumption. Indeed it is quite possible that many will spend their whole time in producing some commodity for which they have personally no need. Examples of this are easy to suggest — a teetotaler working in a brewery, a surgical-instrument maker who is not a surgeon, an optician whose own eyes are perfect. Nevertheless, each is engaged in producing something which is desired by somebody. Trade arises in the necessity that each should get as much as possible of what he desires, and should concentrate his energies on the production of some one article which is desired by others.

The more easily the necessary exchanges are effected, the greater is the likelihood that all will be satisfied,

or that all can be satisfied. The student must remember, of course, that we are not dealing with the relative amounts of goods and services received by each member of the community. That is a totally different problem. At present we are simply concerned with the mechanism of the process, not with the ethics of the distribution. We shall consider the question of the distribution, or allocation of the products of industry, in a future section of the book.

The Mechanism of Exchange — To turn, then, to the question of this mechanism of exchange: we have to consider the fundamental provision of a means of offsetting the products of one man's labor against those of another man. At the present time, although we constantly speak as if every obligation of a commercial nature was solved by the use of money, as a matter of fact money comparatively seldom enters into the matter at all. A complex system of book-keeping transactions takes its place. We have not space to analyze this system carefully, but we may obtain a sound idea of the nature of its work by considering the processes through which most common business transactions pass.

We shall assume, at the outset, that the banks may be regarded as a single institution. The reasonableness of this assumption is obvious from the study of the chapters on banking. Now let us suppose that the Electric Hardware Company desires to purchase a supply of copper wire, nickel, steel, rubber, and silk for the purpose of carrying out its manufacturing program. These goods must be paid for. If "cash" is demanded, the Electric Hardware Company forwards

its check to each of the various dealers as payment. These checks are in turn deposited by the copper, nickel, steel, and silk dealers with the banking system where, for the present, we shall leave them.

The Trade Acceptance—Meanwhile the hardware company proceeds with its manufacture and turns out electric irons, toasters, heaters, percolators, and so on, as required in the market, or, at least, as the company thinks they are required. Its salesmen traveling throughout the country dispose of the products to the local dealers, giving, let us say, sixty days' credit. The Electric Hardware Company, however, must have "cash" with which to pay its workmen. It is quite possible that its balance at the bank is nearly exhausted by the checks drawn in payment of the copper and nickel bills. In order to obtain the required funds it is necessary to anticipate the payment of the goods sold to the retail dealers. There are many different ways in which this anticipating may be done, and it is impossible to outline all. Let us take the method which will, in all probability, be the one adopted in ninety-nine cases out of a hundred within the next few years—the method of the "Trade Acceptance." At the time the Electric Hardware Company dispatches the goods to the retailer, let us say to the Jonesville Hardware Store (W. Thomson, proprietor), it makes out a draft somewhat as follows:

\$500.00

DAYTON, OHIO, January 10, 1919.

To THE JONESVILLE HARDWARE STORE,

WM. THOMSON, Proprietor,

Jonesville.

Pay to the order of the First National Bank, Dayton, Ohio, the sum of Five Hundred Dollars sixty days after the date hereof.

This acceptance arises out of the sale and purchase of Electrical Goods invoiced January 10, 1919, for the sum of \$500 and sold to the Jonesville Hardware Store.

THE ELECTRIC HARDWARE COMPANY,

Per J. SMITH, *President*.

In this particular illustration we will assume that the goods have been sold on the basis of accepting the draft immediately upon receipt of the goods. This is not by any means always the case, but the methods are so numerous that we may as well take one as another, especially as the particular method does not affect the principle. The draft is sent, with the invoice of the goods, to Thomson of Jonesville, who writes across the face of the draft the words "Accepted, payable at the Merchants' Bank, Jonesville," and signs his name. The document is now known as an "acceptance" and is returned to the Electric Hardware Company. The latter company now takes the acceptance to its bank and discounts it, obtaining the discount in the form of an increase in its deposit credit. The hardware company can now draw checks against this new deposit credit with which to pay such current expenses as light, heat, insurance, wages, and so forth. Meanwhile the Jonesville Store is busy selling the goods. Most of the customers

will pay in notes; some by check; a few, possibly, in cash (according to the price of the different articles). Thomson deposits the funds thus obtained in his bank in order to meet the acceptance when the sixty days are up.

At the end of the sixty days, the First National Bank of Dayton forwards the acceptance to its agent in Jonesville, who presents it for payment to the Merchants' Bank. The latter informs Thomson that his acceptance has been presented for payment and requests instructions, in case it has not already received these instructions. Thomson then tells the bank to pay the acceptance and to charge his account. The Merchants' Bank pays the agent of the First National of Dayton (perhaps it is itself the agent), who in turn credits the First National with the amount.

The whole transaction is now complete, and the student can readily see that little or no cash has been involved. What has actually happened, however, is that certain copper miners, steel workers, and so on, have been enabled to obtain food and clothing; the product of their labor has resulted in the provision of raw material for other workmen who, in turn, have received the equivalent of food, clothing, and so on. Their work has passed into the hands of a retail dealer, who, in return for the means of purchasing his own food and other requirements, has passed the goods into the hands of the ultimate consumers. In this manner the whole transaction, or series of transactions, is completed. The part played by the banking system is important. Without the interposition of the banks, there would be hardly any possibility of financing

the different stages of the process of exchanging the products of the miner and the smelter for those of the grocer and butcher. And yet the banks themselves produce no commodity; they merely facilitate the exchanging of commodities. They act, it may be said, as the limestone which is used in smelting iron. The iron ore could be smelted at a very high temperature without the use of the limestone "flux," but by using the limestone, which is not altered in the process, the ore is melted at a much lower temperature. The banks act as the flux of trade.

CHAPTER XX

INTERNATIONAL TRADE

Meaning of the Word *International* — In the last chapter we considered the question of the process of trade between individuals, and we saw that in this trade the essential process is the exchange of goods and services for goods and services, or, in other words, the exchange of utilities. Is there any essential difference between the processes of trade between individuals and between nations? It is fair to say that there are no fundamental differences, but in spite of this there are sufficient modifying influences to make it worth while to give special and separate attention to the question of international trade.

Definition of *Nation* — Our first difficulty is to define exactly what is meant by a nation. Are we, for instance, to regard each state of the Union as a separate nation or merely as one part of the nation? Do Canada, South Africa, and Australia form separate nations or are they part of the British nation? To answer these questions properly it is necessary to distinguish between the political point of view and the economic. A nation, in the political sense of the term, is a group of individuals who have been and are associated with one another, who are conscious of a unity secured by the ties of a common language, common history, common religion, or common government, or

by a combination of two or more of these. From the political point of view, therefore, the British colonies form part of the British nation, and the States of the Union are part of the American nation.

The ties which bind together the members of the political nation are, however, not the same as those which bind the members of the economic nation. Geographical considerations play a much more important part. In the case of domestic trade, as we have already seen, there is a comparative freedom of motion for labor and capital which tends, on the whole, to keep those factors of production fluid. Capital, however, is always somewhat more fluid than labor. The wider the market the less apparent is the fluidity. But this applies much more to labor than to capital. Ties of home and kindred hold the workman in one place, or within a comparatively short radius of one place, when economic motives tend to make him move. The essential factor, then, which distinguishes one economic nation from another is a comparative immobility of labor and capital. The distinction is often enforced by more artificial bars to exchange, as in the case of prohibitions and customs duties, as well as by the mechanical difficulties caused by different coinage and currency systems.

From this point of view, while we should still regard the states of the Union as forming part of the same nation, economically it is better to assume that the colonies of Great Britain are separate nations. Their distance from the home country and from each other renders labor comparatively immobile, and, to a less extent, capital also. Their currency systems are

not always the same as that of the mother country and the artificial hindrances of protective duties tend also to distinguish the nations.

Essentials of International Trade — It is important to recognize that the fundamentals of international trade do not differ from those of domestic trade. Utilities are still exchanged for utilities. International trade is not merely the bartering of goods for goods. We use the word *barter* advisedly, although foreign trade is carried on under a system of credit and money economy. The function of the money and credit system, however, is, as we have seen, merely to lubricate the process of exchange, and the lubricant does not alter the real nature of the process.

Law of Comparative Cost — Exchange of any kind only results when two parties are unsatisfied with their present possessions and are unable to supply their own additional requirements cheaply enough themselves. If each individual by his own unaided efforts were able to satisfy all his wants, there would be no trade at all. But we have seen that even if each individual does provide all his own necessities, the method is wasteful, for it does not take advantage of the economies of division of labor. A successful lawyer may be able to type his own briefs and letters. He does not do so, however, because he can employ his time more profitably in other ways. The same is true of a nation. It is possible for England, for instance, to rear silkworms and so to produce its own raw material for silk. It is also possible for France to produce cotton and woollen goods. But in each case the capital and labor employed would not earn

so much as by being applied in England, say, to the production of cottons and woollens, and in France to the production of silk, the surplus products in each case being exchanged.

In order to make this clear, let us suppose that there are only two countries, *A* and *B*, engaged in trade, and that they actually only produce two commodities, wool and silk. And let us further suppose that in *A* the application of a given amount of labor and capital (which we may call a unit of production) will produce ten yards of woollen cloth and a similar unit of production will produce five yards of silk. In *B* a unit of production will produce ten yards of wool and fifteen yards of silk.

Now if each of the two countries produces both wool and silk, there will be a total production of 20 yards of woollen cloth and 20 yards of silk. It is obvious, however, that a better total result will be obtained if *A* specializes in woollen cloth and *B* in silk. In that case the total production will be 20 yards of woollen cloth and 30 yards of silk. There would thus be a profit for the communities of both countries of 10 yards of silk.

Taking into consideration, therefore, the purely economic reasons, there is a considerable profit in this "territorial division of labor" as international trade has well been called. The very existence of international trade shows that this profit is realized.

Benefits of International Trade — It is obvious from the above brief account of the influence of comparative cost upon production that there is a definite increase in total product when the separate nations

specialize in the products for which they are most suited. This definite increase would be utterly impossible without the development of international trade. Just in the same way, the increase in product due to specialization in labor gave rise to domestic trade.

The great benefits to be derived from international trade, therefore, are due to the extension of the principle of division of labor to the territorial division of labor, which is the essence of international trade. It means an increased economy in the use of labor and capital. The problem which is set to humanity is to make the most of the natural resources of the world. Anything which tends to increase the total returns from the application of the agents of production to the natural resources of the earth, to that extent benefits humanity.

It must not be thought that this is merely a theoretical discussion without basis in actual fact. The truth of the theory can be illustrated from the circumstances of any country which does any foreign trade at all. We have only eliminated certain complications due to the fact that international trade is seldom, if ever, between two countries only. The trading is triangular or even more complicated still. Let us take the case of the foreign trade of the United States. The materials which constitute the content of the foreign trade of this country may be divided into raw materials, or crude products, foodstuffs, and manufactured products. In 1914 (*i.e.*, before the outbreak of the war) the exports of the United States were very largely divided between Europe and

North America, sixty-three per cent going to Europe and twenty-two per cent to North America. The imports came from Europe, North and South America, and Asia, the rough proportions being forty-seven per cent from Europe, twenty-two per cent from North America, eleven per cent from South America, and fifteen per cent from Asia.

Our exports to Europe consisted largely of raw materials and foodstuffs and our imports from that quarter, of manufactured goods. We imported from the other countries raw materials and exported manufactures. Now it is quite possible, for instance, for Great Britain to feed all her own population, as far as cereal foodstuffs are concerned, from her own agricultural area. It has been calculated that, with modern methods of intensive agriculture, Great Britain could feed a population of eighty millions, or nearly twice her present population. Britain does not do so, however, for she finds it better and more profitable to devote her attention very largely to manufacture, and to rely upon the United States, Canada, Australia, and Russia for her wheat. The other countries find it better to devote their energies and facilities to the production of these foodstuffs and to rely upon Great Britain, or upon the United States for manufactures. It will be obvious to the student now that our original hypothesis covers the actual facts.

The war has produced a very natural effect upon the exports of this country. Much of the capital of Europe has been diverted from its ordinary commercial and industrial channels into the manufacture of war materials, and this has thrown the burden of

manufacture upon this country. Even in the manufacture of war materials the resources of the warring countries were not sufficient in themselves to supply the immense quantity of arms and ammunition required, and hence the United States has also made large exports of these commodities. About half the increase in our exports of the last year (1918) consisted of war materials and the other half comprised manufactured articles which the European countries would otherwise have made for themselves.

It is true, of course, that a considerable proportion of this increase in exports is temporary, as it is due simply to war conditions. But there is a strong probability that much of it will remain, owing in a large measure to the increased facilities for production which the forced activities of the past few years have produced.

Theory of International Value — We must now consider the question of the division of the benefits resulting from the territorial division of labor. In all exchange there is a certain mutual advantage, as we have seen in a previous chapter. Exchange will not take place unless each of the parties conceives that he is being benefited. Apart, however, from this inevitable mutual advantage, we must consider the actual proportionate division of the increased product.

Let us recur to our original hypothesis. In the two countries, *A* and *B*, we found that, if the law of comparative cost is actually carried out, there will be a total increase of product amounting to 10 yards of silk for every 4 units of production. How is that 10 yards to be divided? Will it go entirely to

A which produces no silk at all, or will only the amount (five yards) which *A* could have produced itself be exchanged for the 10 yards of woolens which *A* has actually produced in addition to its own requirements?

There are many considerations to be noted before a definite conclusion can be arrived at. In the bargaining between two individuals much depends upon the comparative knowledge and skill displayed by two in determining the rate of exchange. In any individual case it is almost impossible to forecast what the rate will be. In taking the case of trade between communities, however, the matter is somewhat easier, for the individual variations in knowledge and ability are canceled according to the law of averages. In any case, however, there are certain limits. In our particular illustration, we have in *A* a surplus of 10 yards of wool and in *B* a surplus of 15 yards of silk. *A* will certainly not accept less than 5 yards of silk for its 10 yards of wool, for it would prefer to apply the labor which produced the wool to the making of silk and thus obtain the 5 yards. On the other hand, *B* will not give more than 15 yards of silk for 10 yards of woolens, for it could produce the 10 yards of woolens by applying the unit of production which produced the silk, to the making of woolens. Hence the exchange will not be less than 5, nor more than 15 yards of silk for 10 yards of woolens.

These, however, are merely the outside limits. It may happen that *A* does not require more than 10 yards of wool, nor more than 15 yards of silk, and *B*'s requirements are similar. In that case, the

exchange will be at the rate of 10 yards of woollens for 15 yards of silk.

So simple an exchange, however, uncomplicated by questions of cost of transport and hindrances of duties, is seldom secured. Essentially the exchange will be decided by the reciprocal demands of the two countries. That is to say, the law of supply and demand will regulate the rate of exchange. The student must remember, in this discussion, what was said in Chapter X in regard to the limitation of the law of supply and demand.

The question is further complicated when we consider the exchange as being between three or more countries instead of between two only, and also when we add the cost of transportation and the effects of protective duties. To give a full discussion of international trade treating carefully the questions involved in the additional difficulties suggested, would be beyond the scope of this book. One point, however, is worth considering, in that it appears to refute the theory as outlined in the foregoing paragraphs. According to this theory there would be no point in importing into and exporting from a country the same goods, and yet a glance at the tables of imports and exports of many countries will show that this appears to be the actual fact.

As a matter of fact, however, the export and import of the same commodity is an appearance rather than a reality. The United States both imports and exports pig iron. To the layman, pig iron is simply pig iron. But to the expert it is a generic name for many different substances. The varieties imported

into this country usually have some special qualities which the home-produced iron lacks. This is the case in regard to the import of spiegel iron and ferromanganese. In the case of the import and export of cotton goods, again, the goods are of different grades and qualities from those manufactured in this country and exported therefrom, and, consequently, they are actually different commodities.

International Price — We have so far argued as if the whole of international trade were carried on under a system of barter. In a sense, of course, that is true, but only in the sense that all exchange is merely the exchange of goods and services for goods and services, the process being, as it were, lubricated by the money and banking system. Our argument, therefore, is not vitiated by the fact that money and credit instruments are used to a very high degree in the process of international exchange. We shall have occasion in the next chapter to discuss the method of international exchange, and at present the discussion must be confined to the question of the comparative prices of products in the producing country and in the importing country.

Again it is necessary, for the sake of simplifying the argument, to ignore at first the effect of cost of transportation and of artificial interferences to the process of exchange. Leaving these two considerations out of account for the present, therefore, and following the working of the laws of supply and demand in a free market, we arrive naturally at the conclusion that there will be an equation of prices. The export of the goods merely makes the market wider and the

full and free play of competition will result, as in the former market, in the establishment of a market price. It must always be remembered, however, that the working of the law of supply and demand is limited in the manner explained in Chapter X.

Price is, of course, merely the statement of value in terms of money. Consequently there must be an equation of the value of money in the exporting and importing countries in order that our statement of the equation of prices may hold good. Such an equation follows, however, from the facts that we have presupposed, *i.e.*, a free and open market. In the case of countries in which the same commodity is used as money, as, for instance, where both countries use the gold standard, any increase in the value of gold in one country unaccompanied by a similar increase in the other will cause a stream of gold to flow towards the country where its value is higher and thus, by increasing the supply, cause a fall to the same value as that in the country from whence the gold was exported.

The Cost of Transport — An essential variation in the prices of the two countries is due to the cost of transportation. But this increase in the cost due to the expense of transporting the goods from one country to another may be regarded as a payment for an additional service, the services of transport. From the price in the importing country, therefore, we may deduct that part which is due to freight charges, as being payment for the service of transportation — an additional utility to that possessed by the goods imported. Hence in a theoretical discussion, such

as the present, the truth of the argument is not impaired by any question of increased price due to freight charges.

The question of the influence of tariffs must be deferred until a later chapter.

The Equation of Indebtedness — It will be noticed that care has been taken to speak of the exchange of goods and services, rather than of goods alone. It is frequently, but erroneously thought that international trade consists merely in the export and import of actual physical materials. This idea has given rise to the theory that is known as the "balance of trade." This theory has played a very important part in the past history of economics and indeed is still frequently used in commercial articles. It has always been realized that international trade, like all other trade, results in an equation of satisfactions, that is, each party to the transaction conceives himself as getting as good as he gave. Now it is obvious that in international trade the amount of actual commodity exports seldom equals the amount of actual commodity imports. How, then, is the difference made up?

It was assumed that the difference, or balance, was made up by the import or export of bullion to the amount necessary to restore the balance. If a country exported a hundred million dollars' worth of goods and imported a hundred and twenty million dollars' worth, it was assumed that twenty million dollars had to be exported in bullion or coin to restore the balance. When the theory was formulated, there was an erroneous idea that a country's wealth could be measured by the amount of gold within that country.

Hence anything which tended to draw gold to the country was regarded as being beneficial and anything which tended to drive gold away was harmful. In case imports exceeded exports, therefore, the country was assumed to be in a bad position, for gold must go out of the country to make up the difference. In this case, the country was said to have "an adverse balance of trade." If, on the other hand, exports exceeded imports, the balance was favorable, for then gold would flow into the country.

A study of the imports and exports of bullion, however, will show that they bear little relation to the exports and imports of other commodities. The theory, therefore, fails, for it does not fit the facts. As a matter of fact, gold is simply a commodity like any other, and obeys the same laws. As far, then, as the welfare of the country is concerned, the balance of trade is of little importance. It must not be thought, of course, that the balance of trade is without significance. There is, indeed, much to be learned from the relative amount of imports and exports of goods. The old interpretation, however, is proved to have no truth.

This does not answer the question of the actual making up of the balance. If gold does not supply the difference, how is it supplied? There are many factors to be considered. In the first place, we must note the services rendered by one country to another in transport. Before the war a very large portion of the carrying trade of the world was performed by Great Britain. Britain was always in a condition of "adverse balance," and the goods which were

imported over and above the exports in part paid for the freight charges which her shipowners levied on the carrying of goods. It has been estimated that the carrying trade of Great Britain was responsible for imports to the extent of nearly \$500,000,000 annually.

Again loans are constantly in process from one country to another. Merchants and capitalists of one country invest in the securities of another country. French capitalists held the great bulk of the Russian loans. American securities — railroad bonds, for example, are quoted on all the European exchanges. English railroad bonds are held in America. Now when an Englishman buys Southern Pacific bonds he does not pay in actual money. He pays (in the manner which will be detailed in our next chapter) in reality by sending goods to America. There is no immediate and obvious *per contra* to this import of British goods, but ultimately the loan has to be returned, and each year the dividends must be paid, and these return payments mean the export of American goods to Great Britain.

Still further, the governments of countries must maintain staffs of consuls and ambassadors abroad. The payment of these representatives and their expenditure in the countries in which they reside necessitate an export of goods from the country whose government they represent. Tourists, also, making use of travelers' checks, are causing a flow of goods from their home country. When one country pays an indemnity to another, or buys a piece of territory (as when this country purchased Alaska) goods are exported to furnish the payment.

There are other factors, but we have enumerated sufficient to show that the balance is restored by indebtedness which is not obvious in the trade returns. These purchases of securities, lending of shipping services, payments of consuls, and so on, may be regarded as invisible exports and imports, as contrasted with the visible imports and exports of goods. The visible and invisible exports of a country, which represent its indebtedness to other countries, are balanced by the visible and invisible imports of the country, which represent the indebtedness of other countries to the first. Instead of a balance of trade, therefore, what we have is an equation of indebtedness, which is a totally different thing.

The whole question is obscured by the apparent lack of connection between the lenders who purchase securities, and the exporter of the goods which really pay for the securities. This matter will be made clearer in our next chapter.

CHAPTER XXI

DOMESTIC AND FOREIGN EXCHANGE

Difficulties in Paying by Check — The purpose of this chapter is to discuss the mechanism of payments made over a long distance. In a small country like Great Britain, for instance, payments within the country can, as a rule, be readily made by means of the check of the payer. If a merchant in London desires to pay for goods bought from a Glasgow firm, all he has to do is to send his check for the amount. The Glasgow merchant will then deposit the check in his bank for collection.

This method is possible also in America, but it is not so satisfactory. The country is so large that there is necessarily a considerable period of waiting to be done before a check drawn on, let us say a Los Angeles bank, can be paid in New York. The New York bank does not know the drawer of the check and consequently will not pay the amount called for on presentation of the check. He will send it first to his Los Angeles correspondent for collection. This takes time, and the merchant to whom the payment is due hardly cares to wait until collection. He wants his money at once. The Los Angeles merchant, therefore, must provide some other means of payment. This illustrates the difficulty of making payments over a long distance. Domestic exchange, as the

actual system is called, is similar in all essentials to foreign exchange. The only important difference that exists between the two is due to the fact that, as a rule, there are different currency systems in different countries. This complicates the question, without altering the fundamentals. Let us first consider the question of domestic exchange.

Gold or Currency Payments — There is always the possibility of sending actual currency in payment of debts. Our Los Angeles merchant, for example, might send to New York the necessary amount in gold or currency. This necessitates a certain expense, however, for one cannot ship currency without paying for transportation charges. In reality there are three items in the expense of a currency shipment. First there is the actual expense of transportation — the freight, as it were; second, there is the cost of insuring the money; finally there is the loss of interest on the currency during its transport. For example, if a shipment of \$10,000 is made from Los Angeles to New York, it will take about five days to reach its destination. That means that the merchant who has made the shipment will have to remove the currency from the bank, or other place where it is earning interest, five days before he would have to do so, if the payment were to be made in his own city. Therefore he loses that five days' interest, and consequently the amount of the loss must be charged to the cost of the shipment.

If gold is used, there will be a drain of gold to the extent of that payment from the transmitting city. Naturally, however, the shipments are not all in the

same direction, or else the city which sends out the gold would soon have none left. Payments are not only made by the merchants of a city, but to them as well. Hence there will be a certain amount of cross shipping, gold and currency leaving the city and gold and currency entering it.

As we have already seen in our discussion of the checking system, this involves a great waste of currency. The currency is idle while in transport. Not only is it not being used for payments during the interval, but it cannot be used as a basis for credit money to be issued. From every point of view, therefore, such a method is wasteful.

Payment by Draft — The difficulty is very largely solved by means of the banking system. Each community has some central town or city which has relations with all parts of that community. In California, for instance, every town has direct commercial relations with San Francisco. Every bank will have business dealings with the banks in the central city of the community. In a similar way, every town of any importance in the country has definite business relations with New York, which is the money center for the whole country. The relation between the banks of one city and another is known as the relation between correspondent and agent. If the First National Bank of San Francisco deals directly with the National City Bank of New York, it regards the latter as its correspondent. If the New York bank sends its checks drawn on San Francisco to the First National for collection, then the First National is the *agent* of the National City Bank.

The First National, in order to use the National City Bank as its correspondent, deposits funds with the New York bank in the same way in which a private firm deposits its funds in the local bank. Let us suppose, now, that the First National of San Francisco has on deposit with the National City Bank the sum of \$100,000. If a merchant in the Pacific city wishes to make a payment in New York, he has three choices open to him. He may ship currency, he may draw a check on his bank and send it in payment, or he may buy exchange. The latter is the usual method. To do this, he goes to the First National and asks for a "draft" on New York, for a certain sum. He pays for this draft and the banker hands him what is, to all intents and purposes, a check drawn upon the National City Bank. When that check or draft arrives in New York, the bank there charges it against the deposit credit of the San Francisco bank and pays the check just as it would pay a check drawn on a neighboring bank or upon itself.

The banker does not sell this draft out of pure kindness of heart; he makes a charge for his services. There is a limit to the amount he can charge, however. The cost of shipping currency from the Pacific Coast to New York is about \$1.50 per \$1000. The actual cost will vary, of course, according to the rate of interest. If the bank charges more than that amount for its draft, it will pay the merchant to ship currency. Hence, if the bank wishes to do business at all, it must keep its charges for exchange below the cost of shipping currency. The point at which it pays to ship currency is commonly called the "gold point."

These transactions are not all one way. Just as there are payments to be made in New York, so there are payments to be made by New York. The National City Bank, for instance, may have drafts drawn on San Francisco sent to it to be collected. These drafts it forwards to the First National for collection and immediately sells its own drafts on San Francisco to be paid for by the money collected in the San Francisco institution.

This is simple enough, of course, if we deal only with the two cities. But all payments are not made to or by New York. What happens when a payment has to be made, let us say between Peoria, Illinois, and Seattle, Washington? It is not to be supposed that the Peoria bank carries deposits in the Seattle bank, or vice versa. Suppose a Seattle merchant wishes to make a payment in Peoria. He asks his bank for a draft. The Seattle bank, thereupon, sells him a draft, not on Peoria, but on New York. New York exchange is always acceptable, owing to the vast number of transactions with that city. The Peoria bank is perfectly willing to cash the draft, for it knows that it can deposit the draft with its own New York correspondent and sell New York exchange itself.

This method of settling payments over a distance is one of the commonest. There is another method, by use of the discount system, with which we shall deal fully in considering foreign exchange. Before we do so, however, we must deal with the question of the relations between different coinages.

Mint Par of Exchange — In order to simplify the discussion, we shall consider only two coinages, for

the principles involved are the same no matter how many we examine. There are minor difficulties, of course, but these can only be dealt with in a much fuller treatment than is possible here. The British currency is, like the American, on a gold basis. The sovereign consists of a certain weight of gold. So does the dollar. If an English sovereign were to be recoined into American money, the coin would be of the value of \$4.8665. That is to say, there is as much pure gold in an English sovereign as there is in an American coin (if one were actually coined) worth four dollars and eighty-six and two thirds cents. The equivalent is known as the Mint Par of Exchange, or simply, the mint par. It is around this figure that the price of the English sovereign, in terms of dollars and cents, will fluctuate.

If, for instance, an American merchant owes £1000 payable in London and wishes to make payment in gold, he must send gold to the value of \$4866.50 to England. But that amount of gold, sent to England, will cost him more than the \$4866.50. There will be the expense of assaying the gold to determine its purity. There will also be the cost of packing and freight. The shipment will have to be insured, and while on the voyage no interest will be earned. The gold will be out of his hands from seven to ten days and consequently the shipper will not be able to loan the money for that period, or he must take the cash from some investment seven or ten days earlier than would be necessary if the debt were to be paid at home.

If he can buy a draft on London, in the same way

as he would a draft on New York, and the cost of buying such a draft is less than the cost of packing, shipping, insuring, etc., the shipment of gold, he will buy the draft.

The same is true in the case of a debt due by an Englishman to an American merchant. If the cost of the draft is higher than the cost of gold shipment, the gold will be sent. Otherwise the draft will be used. The cost of sending gold, therefore, limits the amount which may be charged for drafts. If we say that the cost of shipping gold amounts to two cents per sovereign, then gold will be shipped from America when the charge for drafts is greater than \$4.8865. Gold will be imported when the price of the sovereign goes down below \$4.8465.

The two points at which gold is shipped are known as the gold points. The principle upon which the theory of the gold movements is based is very simple. The merchant who is desirous of making a payment wants to make that payment as easily as possible. He has a debt of a certain amount to pay, and it costs him something to make the payment. He naturally, therefore, chooses the method of making the payment which will cost him the least.

In actual practice, however, there are difficulties which take away a good deal of the simplicity of the process. For example, the gold points do not always work out as easily as we have suggested. There is still a strong belief in many countries that gold possesses peculiar properties. It is regarded as a kind of insignia of wealth. There is, therefore, a great reluctance to permitting any gold to leave the country. Difficulties

are placed in the way of the exporter which increase his expenses. In some cases, for instance, a premium is charged for purchasing gold for export. This at once raises the gold point beyond the height reached by adding the cost of transportation, interest, etc., to the value of the gold. Governments occasionally prohibit the export of gold and hence gold shipments become impossible. Again, in the United States gold is not the only lawful money, as it is in England (with the exception of some wartime currency). Hence the merchant cannot always depend upon getting gold without considerable difficulty, all of which is expensive. Before the war Great Britain was practically the only country in the world in which gold could be obtained without any restriction. Theoretically no change has been made in regard to Great Britain's position; there is no law or regulation forbidding the export of gold. As a matter of fact, however, those in authority in the treasury in London have not looked favorably on any suggestion to export gold. Bankers have been unwilling to offend the treasury, for obvious reasons, and hence the same result is effected as if there were definite obstacles placed by government against export.

Method of Paying for Foreign Goods — So far, we have dealt with the principles merely. We shall now turn to the actual practice, in order to obtain a clear idea of the causes of fluctuation in the rates at which foreign money is bought and sold.

Let us consider the case of an American merchant who has bought some Chinese silk. He desires to have that silk and dispose of it on the market before

he makes payment to the Chinese merchant from whom he bought it. The Chinese merchant may be willing to offer him, say, sixty days' credit. How is he to pay? The payment cannot be made in the simple fashion of buying a draft on a Chinese bank from an American bank. As a rule American banks do not maintain deposits with banks in China. The method is a little more complicated. Just as in domestic exchange every one is willing to take drafts on New York, so in foreign exchange, drafts on London are always desired.

At the outset of his dealings with the Chinese merchant, the American will have to establish his credit before he can obtain goods. The Chinese merchant as a rule will ask to receive what payment is due by bills on London. The American therefore arranges to pay him in this way. He approaches his own banker and describes the nature of the transaction upon which he is about to engage. If the banker is satisfied, he agrees to open a credit for the merchant for the necessary amount, which, we may say, is for \$10,000. Put into English money, this will amount to (roughly) £2000. The banker instructs his correspondent in London (that is a bank in London with whom he is in the habit of doing business and maintaining deposits) to open a credit to the extent of £2000 in favor of the Chinese merchant. The Chinese merchant will, in due course, receive from the London correspondent a letter somewhat like the following:

LONDON, January 1, 1919.

MESSRS. LEE WONG & Co.,
SHANGHAI, CHINA.

Dear Sirs,

We hereby beg to confirm to you Credit No. 65 opened with us in your favor by Messrs. John Robinson & Company, of New York for £2000 (say two thousand pounds sterling) for which amount we shall duly honor your drafts at sixty days' sight drawn in Shanghai. This credit expires unless previously canceled on January 1, 1920.

All drafts against this credit must be drawn and duly advised to us before that date, and must be accompanied by

Consular Invoice.

Bills of Lading.

Insurance Certificate.

Please insert in your drafts the number and date of the credit and the initials of the firm by whom you are accredited. A copy of the advice to be attached to each draft drawn under this credit.

Yours truly,

THE LONDON CITY AND MIDLAND BANK.

£2000. o. o.

No. 5432.

There are some items mentioned in this letter which require explanation. The value of the goods imported into a foreign country is usually certified to the consul of that country at the place of entry. The consul then signs an invoice showing the amount. This is known as the consular invoice. It frequently happens that before goods imported from a foreign country can be received by the importer from the ship the importer must show to the customs authorities the

consular invoice of the goods. The consular invoice, therefore, is one of the documents necessary to the importer. Again, when the goods are shipped, the shipper receives from the transportation company what is practically a receipt for the goods. This receipt is known as a bill of lading. The importer of the goods must show to the agents of the steamship some authority for his statement that the goods belong to him. Naturally a steamship company will not hand goods to any one who claims possession. The documents which the steamship company recognizes as constituting title to the goods are the bills of lading. In case of loss of the goods, the value can only be recovered from the insurance company by the person who possesses the policy or certificate of insurance. Hence this certificate, also, forms one of the necessary documents. In order, therefore, for the importer to obtain his goods, he must be able to show title by presenting these evidences that the goods are intended for him.

Now let us turn to the position of the Chinese merchant. He receives the letter of credit in due course and has the goods ready for shipment. Before shipping, he obtains from the United States consul in Shanghai a consular invoice for the goods. This he makes out himself and certifies, the consul signing the certificate. Then he sends the goods to the steamer and receives the bills of lading. At the same time he insures the goods with some marine insurance company or broker and obtains the policy.

When he has these necessary documents, he draws a draft somewhat as follows :

JANUARY 21, 1919

To the LONDON CITY AND MIDLAND BANK, LONDON

Pay to my order sixty days after sight, the sum of two thousand pounds sterling (£2000. o. o.). Second and third of same tenor and date unpaid.

£2000. o. o. 65. J. R. & Co.

LEE WONG & Co.

To this draft he attaches the three documents already mentioned. The draft is now known as a documented draft. Lee Wong and Company, however, do not wish to wait for sixty days before receiving payment. Neither do they wish for the actual currency in English money. They take the documented draft to their own bank in Shanghai together with the letter of credit. This letter is evidence to the bank that the company has been authorized to draw upon the London bank. The Shanghai bank discounts the draft, giving the equivalent of the face value, less the deducted interest or discount, to Lee Wong and Company, in Chinese currency. Lee Wong and Company are now out of the transaction. They have received payment for their goods and are satisfied. But Robinson and Company, of New York, have not paid yet, so we must follow the draft a little further.

The Shanghai bank forwards the draft, with its attached documents, to its London correspondent, which is, let us say, Parr's Bank. Parr's Bank, when they receive the documented draft, forward both to the London City and Midland Bank for "acceptance." The latter writes across the face of the draft the words "Accepted, February 25, 1919," and signs the draft. The bank official detaches the documents and returns

the draft (which is now called an *acceptance*), hands the draft to the representative of Parr's Bank and forwards the documents to the New York bank which had opened the credit on behalf of Robinson and Company. The latter hands the documents to Robinson, so that he can obtain the goods.

Meanwhile, Parr's Bank will obtain actual cash for the acceptance by selling it in the discount market, that is, selling it to one of those firms whose business it is to invest money for short periods by purchasing such drafts.

The money obtained by the sale of the acceptance is placed to the credit of the Shanghai bank, which is now able to sell drafts on London to Chinese merchants who have payments to make in English money.

We have now reached the point where the Chinese merchant has received his money and Robinson and Company have received the documents entitling them to the possession of the shipment of silk. The latter obtain the goods and sell them in the American market. Meanwhile the sixty-day period mentioned in the draft is drawing to a close. Before the time is up, Robinsons will have sold the bulk of the goods. They pay the New York bank which opened the credit for them. The bank thereupon forwards the necessary amount to the London City and Midland Bank in time to reach that bank on or before the date of maturity of the draft. On the day of maturity, that is, sixty days after the word *accepted* was written across the draft, the holder of the draft presents it to the London City and Midland Bank for payment. The latter, having received funds from New York, pays the draft and the

whole transaction is finished. Only one thing remains to be said: How does the New York bank send the amount to London?

The probability is that the New York bank has bought drafts on London from American merchants who have English debts due to them, and sends these drafts to the London City and Midland Bank. The latter can then cash the drafts and from the proceeds pay the debt due on the acceptance based on the silk transaction.

The accompanying diagram, Fig. 7, will help to explain the method which has just been described.

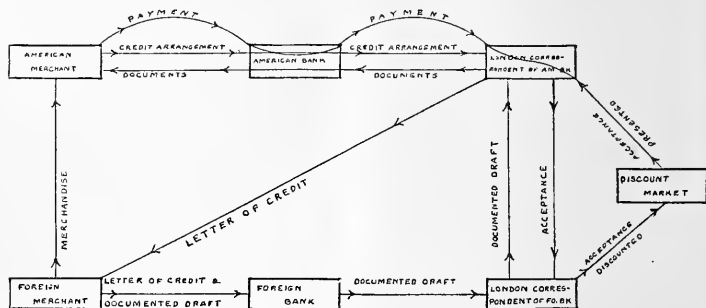


FIG. 7

DIAGRAM ILLUSTRATING METHOD OF PAYMENT
FOR AMERICAN PURCHASE OF FOREIGN GOODS.

The reverse transaction, the payment by a foreigner for goods bought from an American, may be made in the same manner. There is, however, a simpler method which is coming into practice. Suppose a Stockholm merchant desires to pay for goods bought in America. He arranges with his Stockholm bank to open a credit for him in New York. This the latter

does by buying drafts on New York or in various other ways with which we cannot deal. The merchant now has what amounts to a deposit credit in New York. He draws his drafts or checks against this credit and forwards them direct to his New York creditor. The latter deposits the checks in his own bank and the transaction is settled.

It should now be clear to the student that there is a great deal of purchase and sale of debts due in foreign countries. The banks which deal in foreign exchange constantly purchase from merchants the drafts which they have drawn upon their foreign debtors. These are sent to correspondent banks in the foreign countries and then drafts are sold to Americans. There is a definite charge made for each transaction, however. Assuming that all bills are of the same length of time, the charge will to a large extent be governed by the amount of "commercial bills," as the drafts we have been discussing are called, that happen to be in the market. If a banker finds it difficult to obtain bills drawn on London, for instance, he raises his price to the seller. But as he has to pay a higher rate for the drafts he purchases, he must charge a higher rate for the drafts he sells. The smaller the number of commercial bills in the market, the higher will be their price, or, in other words, the lower will be the rate of discount, and the higher will be the price of drafts sold by the bank. That is, if an American bank finds that it has to pay a high price for drafts on London, when selling drafts against the deposit credit he has built up in London, he will ask more dollars and cents a pound sterling.

Finance Bills — The bankers are not entirely dependent upon commercial bills, however. There are ways of manufacturing bills which have nothing to do with commercial transactions. Suppose that the number of drafts drawn upon London, and based upon commercial transactions which involved sales of goods to English or other foreign merchants, happens to be small. And suppose that, at the same time, the demands for London exchange (or sterling exchange, as it is called) are large. Where are the bankers to find the means of adding to their deposits in London so that they may sell sterling exchange? They arrange to borrow from the London banks and to have the loans placed to their credit in those banks. They then sell drafts against the new deposits, relying upon being able either to buy commercial bills to repay the bank in London, or else to renew the loan at maturity. Such bills, based upon loans made by the London banks, are termed finance bills, and they are of great value in keeping the rate of exchange steady, or at least in preventing undue fluctuation.

Effect of the Time Element on the Price of Exchange — All bills are not of the same length of maturity. Some are drawn at sight, some at thirty days, some at sixty, and so forth. Some drafts are sold on the understanding that the amount to be paid in the foreign country shall be telegraphed to the paying bank so that the transfer of the money shall be practically immediate. These latter are known as telegraph or cable transfers. Now obviously, when there is a period of time to elapse before the actual payment is made, the question of the rate of interest becomes

important. The possession of a draft on a bank carries the title to money. But we have already seen that there is a different marginal utility in regard to present and future goods. Hence, a man who has a draft for \$1000 will think himself better off if the draft calls for immediate payment than if it calls for payment in sixty days. He will, therefore, be willing to pay more for money immediately available than for money at some future date. The rate for cable transfers is, as a consequence, higher than for sight drafts, which, in the case of American bills drawn on London, means a delay of about ten days before payment can be made. Sight drafts will be higher than thirty or sixty-day paper, and so on.

The rate of exchange between two countries, then, is not a single rate, but varies according to the length of the maturity of the drafts. In any table of exchange rates it will be seen that a series of rates is given for each country mentioned in the list.

Effects of the Rate of Interest upon Exchange Rates — Ignoring differences in the length of time at which the drafts mature, there remains to be considered the effect of changes in the rate of interest upon the exchange rate. If interest rates in London are high, American foreign exchange bankers will be anxious to take advantage of those high rates and to increase their deposits in London. To do this, they must buy drafts that are drawn on London. The increased demands for those drafts raises their price. A high rate of interest in London means a high price for commercial bills drawn on London. As soon, however, as the increased deposits in London have reached

the point at which the supply of loanable funds or credit in London is great enough to cause a fall in interest rates, the demand for bills drawn on London will decrease, and hence the price for them will fall.

The Causes of Gold Movements — We have seen above that the increase in the interest rates abroad causes a rise in price of commercial bills drawn on the foreign countries. As the reason for this increase is the desire of the bankers to increase their interest-earning funds abroad, where the high rate obtains, they will only sell exchange on the foreign countries (that is, sell drafts drawn upon their foreign deposits) at a higher rate. If that rate should go beyond the gold point, there will be shipments of gold. A certain class of banker watches these interest rates very closely. As soon as it becomes profitable for him to ship gold to the foreign country (or to import gold from abroad) he does so. The actual percentage of profit made on these transactions in gold is very small, but the large amounts of gold actually shipped make the actual amount of profit sufficient to justify a very considerable business. Such a business is known as *arbitrage*.

Again, it must be remembered that America is a gold-producing country and gold takes its place with ordinary merchandise. The balance of trade, therefore, has nothing whatever to do with gold shipments, and while the phrase is not without value in the estimation of the trade conditions of a country, its value is very different from that attached to it by the mercantilist philosophers who originated the phrase.

CHAPTER XXII

PROTECTION AND FREE TRADE

Definitions of Protective and Revenue Taxation —

In our discussion of the theory of international trade we considered the question from the point of view of free competition. This was necessary in order to clear the ground for the further discussion including those factors which tend to modify conclusions drawn from such a standpoint, or, in other words, the discussion of the limitations of competition between nations caused by the presence of hindrances not due to natural causes.

We shall, in the present chapter, consider some of the problems caused by the imposition of protective duties, but before we do so we must understand exactly what is meant by protective duties. Some of the factors dealt with in the present discussion are also included in the study of public finance — a study which will be touched upon in a future chapter, but it is sufficient, for the present, if we understand that in the financial arrangements of a country other questions are considered besides the mere collection and expenditure of revenue. Provisionally we may say that taxes may be divided into two parts, the first including those which are imposed entirely for the purpose of providing funds to carry on the administration of government, and the second containing those which

have for their aim the regulation or stimulation of industry, and whose revenue-collecting functions are incidental.

To the first class we assign the term *revenue duties*, and to the second, *protective duties*. In both classes we are restricting ourselves to the consideration of indirect taxes; that is, taxes whose incidence may be shifted several times before the final tax bearer is reached. Our meaning may be made clearer by an illustration. A tax on tea is usually paid by the importer, but he adds the amount of the tax to the price he charges to the jobber. The latter again includes it in his price to the retail dealer, who transfers it to the consumer. On the other hand, a tax on income is usually paid by the person upon whom it is levied, *i.e.*, the person in receipt of the income. The latter tax is direct and the former indirect.

All indirect taxes are not protective, however. To be protective the tax must not fall on all the goods which form its subject. For revenue purposes the tax should fall without distinction on goods produced within the country and similar goods imported from other countries. The protective tax falls only upon those goods which are of foreign origin. Taxes on liquor, which are levied on imported as well as home-made liquor, are obviously instituted for the purpose of gaining revenue. On the other hand, taxes which are imposed upon imported steel goods, but not on steel goods manufactured within the country, are protective duties. There is a definite distinction between the foreign and the home product, and the object of the imposition of the tax is not primarily the

obtaining of revenues, but the elimination of foreign competition from the steel manufacturing business within the country.

It should be obvious that a revenue tax does not interfere with international trade as far as freedom of competition is concerned, whereas the protective tax is designed to produce such interference, in order to handicap the foreign producer and prevent him from obtaining the fruits of his comparative advantage in production.

Effect on Prices — If a protective duty is to be of value to an industry it is essential that it should mean a rise in price of the protected articles. If, under free competition, a price is reached, we know that such a price is the result of the interplay of the laws of supply and demand. The price of foreign goods introduced into a country cannot be greater than that of those produced within the country, for if it were the foreign goods would not be sold and they would soon cease to be imported. On the other hand the price of the home-produced goods cannot exceed that of the foreign goods, for if so, the home production would not be sold. Hence the objection to the free importation of foreign goods is due to the supposition that the price resulting from free competition is too low to be satisfactory to the home producer.

If, therefore, the protection extended by the imposition of duties upon imported foreign goods does not enable the home producer to raise his price, from his point of view there is no good result. For instance, if the price for a certain commodity is fixed under a

system of free competition, at \$5 a ton, the demand for protection against foreign imports of this commodity must be due to the belief that \$5 a ton is too low to be sufficiently remunerative to the home producer. If, then, a protective duty of \$1 a ton is imposed on imports, and the price to the consumer is still \$5 a ton, wherein does the home manufacturer profit? He is no better off than before. Obviously, therefore, the purpose of the duty is to enable the home producer to charge a higher price for his goods.

It would seem from the above argument that the imposition of a duty which was so high that it prevented any importation of the taxed commodity, would raise the price of the home product by exactly the amount of the duty, any further rise, of course, making it again worth while for the foreigner to enter the market. This is not necessarily the case, however. We may distinguish three cases. The first is that in which the duty has no effect whatever. If we consider the case of a commodity which is produced as cheaply at home as abroad (allowing for the cost of transportation of the foreign goods) and in sufficient quantities to satisfy the home market, there will be no reason for the importation of that commodity. The price will be decided entirely by the conditions of the home market. Any duty imposed on importation, therefore, will have no effect whatever on the price. This case is not so impossible as it might appear. American duties have been demanded and secured against the importation of foreign wheat and meat products. But as these goods have been produced in ample quantities for the home market

and just as cheaply as abroad, the imposition of the duties has been without effect upon prices.

The second case is that in which the imposition of the duty has not succeeded in preventing importation of the foreign product. In this case, the consumer necessarily pays the foreign price plus the exact amount of the duty for any foreign product he may buy. That is to say, the difference between the price of the home product and the net price received by the foreigner is exactly the amount of the duty. This does not necessarily mean that the price to the consumer has been increased by the amount of the duty. It may be that the cost of production of the foreign commodity is such that the producer can reduce his price and still make an adequate profit. To illustrate this let us return to the case of the commodity sold at \$5 a ton before the imposition of the duty. If a specific duty of \$1 a ton is imposed upon importations, and the foreigner cannot reduce his own price, the new price to the consumer will be \$6 a ton. The foreign goods which are actually imported will pay \$1 a ton to the government. But suppose that the foreigner can sell at \$4.50 a ton and still make a satisfactory profit? In that case he may reduce his net price to \$4.50 and send in the goods. The price to the consumer will, therefore, be \$5.50 and the home producer cannot exceed that price. Hence, while the difference between the net price of the foreigner and the price charged by the home manufacturer still amounts exactly to the \$1 of duty imposed, the actual increase in price to the consumer is only 50 cents.

The third case to be considered is that in which the importations are absolutely prohibited. Here the probability is that the consumer pays an additional price amounting practically to the whole of the duty.

There are various considerations which affect the question of the continuance of exports after an import duty has been charged. Matters of freight, for instance, may have considerable importance. It sometimes happens that the freight charged on commodities imported from a foreign country is considerably less than the amount charged for transportation within the country. Water carriage is invariably cheaper than rail, and sometimes special considerations allow of a great reduction even in water carriage rates. When Great Britain imports cotton from Galveston, the steamers are often glad to get a return freight even at very low rates in order to prevent the necessity of having to return in ballast. Hence a rate for steel rails to Galveston may be less than the cost of carriage, and, therefore, considerably less than the cost of rail carriage from the North. This difference in cost will amount, in effect, to a comparative advantage in production and hence may prevent the rise in price of the commodity up to the full amount of the duty.

Protection of Young Industries — The greatest strength of the arguments in favor of the retention or development of the protective system lies in the appeal for the protection of young industries. But before we can discuss this we must analyze the reasons upon which the demand is based.

In the first place it may be claimed that there is a

comparative advantage in the production of a certain commodity, when the manufacture or production is at maturity, but that in the early stages of production the industry could not compete with the already matured foreign competitor. Hence it is claimed that if this industry is protected in its early growth it will have a chance to develop into a strong position and ultimately hold its own on even terms with the foreign industry; and even to defeat such competition in foreign markets.

In the second place, it may be admitted at the outset that the question of comparative advantage does not arise at all; that the industry under consideration does not and cannot possess a comparative advantage. The basis of the argument for protection, however, does not lie so much in economic considerations as in political. It is believed that, in order to be prepared for emergencies, such as war, for instance, a country should be as nearly as possible self-supporting, and particularly so in the case of production of means of warfare. It is obvious, in this case, that the argument based on the possibility or otherwise of producing at a comparative advantage is beside the point. The main idea is based on the possibility of production at all, no matter at what cost.

A further argument affecting the question of protecting industries is the "foreign cheap labor" argument. It is claimed that, as the average rate of wages in America is higher than in the older countries, the industry which is just commencing and even the mature industry is at a disadvantage in that its wages cost is so much higher than abroad.

These three arguments are the chief support of the protectionist case for the protection of industry. We shall now consider them carefully and attempt to determine the extent of their validity.

The first case divides itself into two main sections. First, the case of young industries commencing in a young country, and second, the case of young industries in a country already well established in production. The first case is well illustrated by countries such as the United States in its early days, and by the more important of the British colonies.

In those industries in which the initial cost of establishment is small, the question of long establishment is not important. If fixed capital bears a small ratio to the total capital involved and if the labor facilities are ample, there is no reason for protection. The industries will commence at the outset in as good a position as those of established foreign countries. This is provided, of course, that the comparative advantage of production, if any, is in favor of the new country. Of course, the case is different if the comparative advantage lies with the old country. But in this case, the question of protection comes under the discussion of our second main heading, and so may be ignored here.

In other cases, where the initial cost of establishment is heavy, and where the labor skill has to be gradually acquired, there is a very much stronger case for protection. In the establishment of any industry which requires a heavy expenditure for fixed capital there is usually a considerable lapse of time before returns for that expenditure are received.

This is true, even where the labor skill is already existent and available. A manufacturer who starts such an industry, in the face of efficient competition, is at a disadvantage. This is so, even if he has not to consider competition from other firms who are already well established.

The object of protection is to eliminate competition and so permit the manufacturer to commence work with only the ordinary disadvantage of having to wait a certain time for returns on his investment. Even this is sometimes made more easy for him by the offer of bounties on the export or production of the new goods. This, of course, is merely another form of protection. It is assumed, however, by the very nature of the claim itself, that when the industry is mature and well established, the initial difficulties will be overcome—the infant industry will have gained its majority and will no longer require protection. Indeed the industry ought to be able to produce at a cheaper rate than that charged for the foreign goods and thus reimburse the country for the original expenditure in protecting its young growth.

In this case it is necessary to assume that the industry only requires temporary protection. The object of the protection is to permit the industry to be established on a sound footing and then let it take its own place in the competitive system. The question then arises: When is it clear that the industry no longer needs the protection? In other words, when does an industry reach maturity? Herein lies the objection urged even against such protection as we have outlined. Industries which originally demanded protection on

account of their infancy insist on the retention of the protective duties when they have reached a lusty maturity. When it is clear that an industry can obtain its product at a cost as low as that of foreign countries and can, therefore, compete on satisfactory terms with any foreign goods that may be imported, it has obviously reached maturity. If the industry goes on from decade to decade and still the cost of production is greater than that of foreign countries, it is clear that the comparative advantage lies with the latter, and hence the justification of the continuance of protective duties lies outside the consideration of our present argument. It is not sufficient that the industry should show merely a reduction in the cost of production and a consequent reduction in price to consumers. For it may be that a similar reduction can be shown in regard to foreign-produced goods. The reduction must eventually be down to that of the foreign goods. If this equality in cost of production is never reached, then the continuance of protection constitutes a tax on the consumers which may or may not be justified by other considerations. At any rate it no longer rests upon the necessity of protecting a young industry.

Even admitting the validity of the argument, therefore, the difficulty of ceasing to protect an industry when it has reached maturity constitutes an argument against such protection. It must be understood, of course, that a sudden cessation of protection may be extremely unwise, but even the ardent free-trader seldom demands that an industry which has been protected for many years should, at a single stroke,

be deprived of all protection. But in actual practice, every suggestion for a diminution of the duties is bitterly fought, the grounds in favor of the retention of the duties being changed to suit the new circumstances. Even in the same breath that the manufacturer boasts of the superiority of his goods to those of the foreigner, he declares that, without protection, his industry must fail.

From being asked as an encouragement to commence a new industry, protection comes to be demanded as a right, and is regarded as a permanent institution. It is because of this tendency for the protection to be afforded long after the original necessity has ceased, that the free-trader regards even "young industry" protection as poor policy.

The same arguments apply equally to protection of new industries in a country already well established. But in addition it may be said that the more one admits of protection to new industries in such a country the more one arouses a general demand for protection on the part of other industries. Industries may be new, but it does not necessarily follow that their establishment is a matter of difficulty on account of existing foreign competition. If the new industries are simply further developments of existing industries, there is hardly a case for protection on the grounds of newness. If, on the other hand, they are not connected with any existing industry and have to be built up from the ground, their case comes under the same general arguments as those which support protection to infant industries in a new country.

On the whole, we may sum up the argument in favor

of protecting infant industries by admitting that there is a great justification for protection, but that a considerable difficulty is caused later by the fact that it is next to impossible to persuade those in control of an industry that the period of infancy has passed, and a further difficulty is the creation of a feeling that protection is a natural state of industry. It is noticeable that when industries cease to be infants, those in control demand the continuance and even the increase of protection on quite different grounds, and we shall now, therefore, proceed to the discussion of some of those additional arguments.

The National System — The discussion of this second basis of protectionist arguments really belongs to the field of political science. If we assume that the true purpose of economics is to show under what conditions the world may make the best use of its economic possibilities, we are inevitably led to the conclusion that the doctrine of comparative advantage, or, as we have previously called it, the law of comparative cost, must have the freest possible play. The law of comparative cost is only the application of the principle of division of labor on a wide scale, a division according to territories instead of according to individuals. Anything which hinders this free play is, therefore, a hindrance to the fullest economic development, and consequently a protective system, which is designed as a hindrance to such free play, helps to prevent that full economic development.

The free economic development of the world, however, takes no regard of national aims. It is dis-

tinctly international in its character. National aims presuppose the possibility and indeed the probability of mutual antagonism between nations. Hence it is not considered an unmixed blessing that the whole of the world's development should be in strict accord with its economic possibilities. Each nation, according to the supporters of the national point of view, must regard itself as complete, a separate and well-defined entity. Within the nation the greatest possible economic development may take place. But that a nation should be dependent upon another for any commodity or service which it could provide itself, would be a reduction of the national strength.

The strongest case is made out in times of war. At such a time it may be essential that each country should be as self-supporting as possible. The more a country approaches to the state of a complete economic unit, the less the danger of its being starved through a blockade, or forced to surrender through a lack of means to produce munitions of war.

Granting the importance of securing this economic unity, how does the protective principle affect the solution of the difficulty? Purely by preventing the operation of the law of comparative costs. If the desires of a people remain constant, the prevention of the satisfaction of these desires through foreign commerce leads to the demand for domestic production, and hence industries which, in a state of free competition with foreign countries would not stand a chance of existence, are brought into being and may flourish.

Obviously this is not done without a loss to the community. Whether the loss is commensurate with

the gain secured by reason of the attempted economic independence in time of war, is indefinite. Granted that a war takes place, it does not necessarily follow that the countries involved will be compelled to depend upon internal resources for all economic needs. A first-class war, in these days, seldom confines itself to two nations. The late war is an illustration of the position. It is extremely doubtful whether the war would have been more satisfactorily conducted, from the point of view of either side, had the countries concerned been individually economic units, or had they even approached this state.

On the other hand, in order to secure this problematical advantage in the case of war, the community is undoubtedly saddled with a very considerable addition to the cost of its necessities, which means a corresponding decrease in the possibilities of internal development.

The foregoing argument is based on the assumption that a protective system would be successful in securing a comparative economic unity. It is not possible, however, for any system to do more than limit a country's dependence upon external supplies. Many of the necessities of our present life are capable of being produced only in limited areas of the world's surface, and as these products must be paid for by the exchange of goods a certain amount of international trade is essential.

From the point of view of the nationalist argument, therefore, the protectionist method results in the payment of a very heavy price, increasing with the success of the method, for a problematical advantage.

The Mercantilist Argument — We now turn to another protectionist argument which has enjoyed a great deal of support from protectionists of earlier days and, indeed, through some of its terminology, remains popular to the present time. The school of economists who preceded Adam Smith in the middle of the eighteenth century were known as mercantilists. It is not necessary to discuss the whole body of their economic doctrines, but we must take notice of the chief, or one of the chief ideas that they promulgated. The mercantilists laid stress on money as an indication of national wealth. They were inclined to believe that the wealth of a country varied directly with the amount of gold and silver that it possessed. Hence they urged that such measures should be adopted by government, in its regulations of commerce, as would secure the greatest influx of the precious metals into the country, and at the same time prevent their export.

They argued that if the amount of exported merchandise exceed the value of the imported, the difference must be paid in coin, and hence the excess of exports over imports necessarily resulted in an influx of gold to pay for the difference. This difference they spoke of as the "balance of trade." When exports exceeded imports the balance was said to be in favor of the exporting country, and vice versa. We still hear these terms used in discussion of tariff problems and indeed other economic problems, but we already know from our discussion of the principles of international trade, that the term *balance of trade*, as used by the mercantilists, was meaningless.

Where these thinkers were at fault was in their consideration of visible exports and imports alone. They were not aware of the now well-recognized fact that the invisible exports and imports account for a great deal, if not all of the so-called balance. Even if we suppose it to be true that the best index to a country's wealth consists in the amount of gold within the country, the actual facts do not show that an excess of visible exports over visible imports leads to an influx of gold. As we have already seen, the movements of gold are controlled by totally different factors.

But it is surely obvious that the possession of gold is not an indication of national wealth. The point is so trite that it is not worth considering. Indeed it is surprising that the mercantilists themselves did not realize the full extent of their fallacy with the amount of historical refutation available to them. At any rate, such a belief is inexcusable nowadays.

Cheap Labor — Another argument which is frequently used in support of the continuance of protection is what is known as the "cheap labor" argument. It is pointed out that American labor is comparatively highly paid and hence the labor cost of the American product is high in proportion. The American manufacturer is, therefore, handicapped in competing with the foreigner who uses cheap labor. It is made a strong point that the protection is required not so much for the manufacturer as for the workmen themselves.

Investigation of this argument, however, shows that it is not so strong as appears at first sight. In the

first place there is a distinct fallacy in the statement that high wages mean high labor cost. This by no means follows; in fact, it is usually the reverse. High wages are apt to coincide with a high degree of machine work and efficiency and as a consequence, it often follows that high wages lead to reduced labor cost. If this is the case, and it is demonstrably true in a great many instances, the argument that protection is required to prevent the evils of competition from cheap labor, falls to the ground. The inefficiency of cheap labor is notorious, or should be to any one who has spent a short time in studying the working cost of Asiatic productions and the labor cost of cheap labor products in Europe. The yellow peril need not cause much fear if the true facts of labor cost are understood.

Dumping — One final argument we shall notice. It is claimed that a country should protect its producers from the competition of "dumped" foreign goods. What is meant by dumping? Cheap production may often best be secured through large-scale operations, but the highest returns may be obtained by a comparatively small home sale at a relatively high price. If this idea is followed out a manufacturer may sell part of his product in the home market, carefully restricting the supply available for that market in order to reap the high price. What is left of his stock he can afford to dispose of at a reduced price in some other market. Hence he sells the remainder to a foreign buyer at a low price, possibly covering cost, possibly even at a loss, for anything received for this amount which he definitely with-

holds from the home market is so much profit. This cheap disposal to a foreign country is known as "dumping." A careful study of the process, however, will show that dumping is only possible under certain conditions. The product must be in the nature of a monopoly; otherwise the market could not be held up to the high price at home. Even then the production must be operated under the law of increasing returns. For if this is not the case there will be no profit in producing the extra quantity of goods which are dumped. This extra amount would increase the relative cost, or cost per unit, and therefore reduce the home profits instead of adding to them.

Dumping at a price less than cost, or even at cost, is only possible for a certain length of time. The prevailing high prices in the home country, which provide the means of sustaining the dumping process, are sure, sooner or later, to arouse competition. This will reduce prices and so prevent the continuance of dumping without the serious risk of bankruptcy. As a temporary expedient many firms who have tried it have found dumping to be unsatisfactory.¹

In this discussion of the protectionist and free trade doctrines we have carefully refrained from the use of statistics. There is no greater danger to the satisfactory discussion of economic problems than the use of statistics by those who are untrained. It has

¹ This spasmodic dumping has been criticized as causing irregular work, tending to spoil reputation because quality and costs are cut keenly. The president of the United States Steel Corporation spoke of this sort of dumping as a kind that "does not develop continuous business." (Testimony of the government suit against the Steel Corporation. 1913, x, p. 3843.)

been said that figures will prove anything. If the principles of statistical science are followed out this statement is not true, but an unscientific use of statistics will often bolster up an argument which is really untenable.

CHAPTER XXIII

INVESTMENT AND SPECULATION

The Flow of Capital — We have already had occasion to refer to the flow of capital. This must now be considered a little more fully. Our definition of the term included “that form of wealth which is used for the production of more wealth.” This definition is unaffected by the ownership of the capital. The owner of wealth who desires to use it for the production of more wealth does not necessarily have to employ the capital himself. He may lend it, for a consideration, to others who will use it in their business. The transfer of the capital from the owner to the user does not alter its character.

We may take it as a fundamental fact that, other things being equal, the owner of the capital desires to obtain the greatest return possible from its use. The limitation is important, for the element of the safety of the capital is one which deserves careful consideration. Of two methods of using capital, both of which are equally safe, that one will be chosen which promises the greater return. Hence capital which is employed in a business which does not lend itself to the earning of the largest returns consistent with safety is always liable to be transferred to another industry or occupation where the profits are higher. This is only true, however, of liquid capital. Fixed

capital cannot be easily transferred. It is not true, for instance, that because the automobile industry promises greater returns to capital than the cotton industry, cotton factories will therefore be turned into automobile plants. On the other hand, a firm which has been engaged in manufacturing bicycles may realize that greater profits could be obtained by making motor cycles and may comparatively easily adapt its machinery to such production. This is possible only where the fixed capital employed in the old business is capable of being used in the manufacture of the new product with comparatively little change. How then does capital flow from one industry to another?

Investment — There is always a certain amount of what is known as liquid capital seeking employment. This capital is always represented by money or the equivalent of money. That is to say, it is not fixed capital. It may be converted into fixed capital, of course, for money and its equivalents imply a command of fixed capital. This money is open for *investment*. That is to say, the owners are not, as a rule, desirous of using the capital themselves. They are willing that others should use it, provided they receive a share in the profits resultant from its use.

Merchants and manufacturers who do not themselves possess sufficient capital for their own requirements, and who could use more with satisfactory results, invite the owners of idle capital to lend them their funds, or to "invest them in the business." The investors do not necessarily lose control of their capital. In most cases the fact that they have invested funds

in a business gives them the right to a say in the management of the business, proportionately to the amount invested. Apart from this fact, however, they are always at liberty to sell their holdings to others, if they can find purchasers. In this way the fixed capital remains with the business. All that changes is the ownership.

The profits resulting from the employment of capital may be used in two ways. Either they may be used for the purchase of consumption goods; that is, goods to be used in the satisfaction of ultimate wants, or they may be invested in business. With the former use we are not at present concerned. The latter, however, is the method by which the flow of capital is secured.

As we have said, capital flows toward those occupations which provide the greatest returns, other things being equal. There is always a point at which capital will cease to be employed in any business. That is the point at which the profits are not sufficient to provide more than the necessary expenses of operation. This statement, in practice, requires a certain modification. Investors do not always look to immediate results. It is quite possible for capital to be attracted toward an industry or business which at the moment is not earning profits. In these cases, however, the investors hope that the future profits will be such as to offset the temporary lack of earnings.

But in the ordinary case where a business has ceased to earn profits in excess of the operating expense, those who have invested their funds in the business will endeavor to sell their holdings even at a loss,

in order that they may invest the proceeds in some business that is actually earning profits. They realize that it is better to earn a profit on a small investment than nothing on a large one. The buyer of the shares justifies himself with the belief either that the business is likely to improve, or that in liquidation he will receive a sum greater than that paid for the shares. Usually it is the former which decides the purchase. Occasionally, also, the holder of an investment desires to use his funds for the purchase of consumers' goods, in which case, all that happens is that the ownership of the investment changes hands.

Par and Investment Price — In the buying and selling of invested capital there is a great deal of price fluctuation. Leaving out of consideration, for the present, fluctuations due to speculative causes, the changes in price are primarily due to changes in the earning power of the business. Following out the laws of supply and demand, which we have already studied, there is a tendency for the returns to the investment to be averaged fairly evenly. Given equality of security, for instance, we may say with a fair degree of accuracy, that the returns to one investment will tend to equal those from another of the same amount. To illustrate this, let us suppose that by investing \$1000 in a certain business a return of 4 per cent is secured. Let us suppose that the average rate of interest is 5 per cent. No person who buys the investment of \$1000 from the original investor will give \$1000 in payment. His reasoning is simple. By investing \$1000 at the average rate he can obtain 5 per cent. Why, therefore, should he pay for an

investment which will only yield 4 per cent? He offers, let us say, \$800. If the sale is made, then the new holder of the investment receives as interest on his shares 4 per cent on the original \$1000, or \$40. But as he only paid \$800 for the investment, the actual amount earned on that \$800 is equal to a rate of 5 per cent, the average rate.

If, on the other hand, the average rate of interest is 3 per cent, the holder of the original \$1000 shares will not sell at par, or face value. If he did, and then tried to invest the \$1000 again, he would only gain 3 per cent instead of four. He demands a higher price and the sale is made at about \$1300, which gives a rate of approximately 3 per cent to the purchaser. When shares are sold at their face value, they are said to be *at par*; when sold at less than par value, they are sold *at a discount*, and when sold at more than par, they are *at a premium*. Shares, therefore, tend to be at a premium when the rate earned is greater than the average rate and at a discount when it is less than the average rate.

The Future Element in Business — This is simple enough to understand if we consider the price as being entirely determined by the present earning capacity of the business. But the investment market is very easily influenced by hopes and fears. In fact it would be almost safe to say that the hopes and fears have a greater influence on the market than present conditions. Now the causes which produce and influence these hopes and fears are innumerable. Hence there is a constant fluctuation in the value of investments.

The future element in business is not confined to

stock and share investments, however. In every aspect of business the future is to a certain extent discounted. The prices of commodities are affected by the prospects of increase or decrease in the supply, a possible scarcity in the future leading to a holding of stocks for the future market, thus raising prices in the present market by reducing the effective supply, and reducing future prices by increasing the future supply.

Speculation — It is the future element in business which gives rise to speculation. There is hardly any more controversial subject than the question of the values and evils of speculation. In order that we may examine this question in a satisfactory manner we must be quite clear as to the meaning of the term. Like many others, it is used with great laxity of meaning, and without careful definition no argument is possible.

In every meaning which is attached to the term *speculation*, there is one common element, that of future uncertainty. The greater this uncertainty, the greater is the speculative element. But future uncertainty is ever present in life, and business is peculiarly subject to it. Any man who undertakes to supply some of the needs of the community runs the risk of misjudging those needs, or of not being able to satisfy them at a price remunerative to himself. He runs the risk of being forced out of business by competition, by inability to do the work properly, by lack of capital, by failure in the supply of raw materials, by convulsions of nature which destroy the economic value of his situation, by the vagaries of the

weather, and so on to infinity. Any man who wishes to enter business and avoid these risks is asking the impossible. In so far as he accepts these risks he is speculating. That is, he is taking a chance that his future profits will not be seriously interfered with by these possible future dangers.

No one will attempt to deny that this sort of speculation, the risking of the inevitable dangers of commercial life, is justifiable. It has its evils, no doubt, but these evils are inherent in commercial life and cannot be avoided. No one has any respect for him who wraps his talent in a napkin and buries it.

But these inevitable risks are minimized to the greatest possible extent by the wise business man. A good farmer does not plant his seed without considering first the possibility of getting the crops to market. The banker does not invest the capital of a metropolitan bank in a little country town. Still, no matter how great the care taken, losses are bound to occur. All that can be done is to minimize the losses and spread them over as large an area as possible so that the blow to the individual will be lightened.

In many discussions of speculation great stress is laid upon the form which we have just described. But the discussions lack life, for the common use of the term practically ignores that form of its application.

Stock and Share Investment — We have already seen that in the sale and purchase of stocks and bonds we have the mechanism for the flow of capital. Assuming the existence of the free play of competition in an open market, the rate of profit on industry is determined by the ability displayed by the manufacturer or mer-

chant in satisfying the demands of the community, or by special circumstances which give him a peculiar advantage in producing the goods or services required. Loss occurs when the demand of the community does not exist or is not of sufficient strength to justify the amount produced. Hence the flow of capital tends to insure that those services which are desired by the community attract the necessary amount of capital to cause their production.

The owner of capital which is free for investment must keep a keen watch upon the growing needs of the community. If his judgment shows him that a particular commodity or service is likely in the future to be in greater demand by the community, he takes prompt advantage of that judgment to invest his capital in the production of that commodity or service so that he may reap the profit bound to be realized as the public demand grows. He may be said to render a public service in that he anticipates the need of the community and provides satisfactions for its desires as soon as they arise.

It may be, of course, that his judgment is in error, and he reaps the fruits of that error by unnecessarily increasing a supply and consequently decreasing the price of some commodity. The result is a loss, not only to him but to other producers who were first in the market. If we assume that, on the whole, he is correct in his anticipations, then he prevents the sudden rise in prices consequent upon a sudden increase in demand with a constant or decreasing supply.

To make this more clear, let us take an illustration. Let us suppose that a certain investor foresees that,

owing to the discovery of some new method of providing the generating force for electricity there is likely to be a great increase in its use. The result will be a considerable increase in the demand for copper, rubber, etc., for conductors and insulators. He invests his capital in the production of copper and to that extent increases the supply of copper. As the demand for copper materializes the supply is shown to be more nearly adequate to the demand than would otherwise have been the case, and while there may still be an increase in price, the increase is not so great as it would have been had there been no increase in the supply. The public is, therefore, able to reap the benefit from increased use of electricity without having to pay an unduly high price for copper.

The cases referred to above, however, only refer to speculative investments and not to pure speculation. If all speculations were carried on with the idea of reaping profits through the intelligent anticipation of the future needs of the public, there would be little criticism. Moreover, there would be no desire to juggle with the prices of stocks and bonds. But a vast amount of speculation has no real relation to the investment of capital. The speculators do not invest; they merely play with the rises and falls in prices of different securities. This amounts to mere gambling and in spite of a certain amount of specious arguing to the contrary, there can be no economic justification of these operations.

The Method of Stock Exchange Speculation — In order to understand this matter better, let us consider

the methods of the stock exchange speculator. Suppose he has a capital of \$20,000 with which to operate. He decides that a certain stock, let us say, Montana Copper, is due to rise in price. His reasons for thinking this copper company's stock will go up may be due to careful consideration of the copper market, or they may be due to "inside information" that a bigger than usual dividend is to be declared; or he may hear that some big operator is planning to get a controlling interest in the mine, or any other of a multitude of reasons. Whatever they are, however, he decides to buy. He places an order with his broker to buy a thousand shares at the market price which is, let us suppose, 110. This would appear to call for a capital of at least \$110,000, which is more than he possesses. He does not pay for the stock himself, however, he merely "puts up a margin" of ten points. That is he pays about ten per cent of the price to his broker. The broker on the strength of the deposit of securities with the bank obtains a call loan for the balance. The actual amount which the speculator has paid the broker is \$11,000. Now if the shares go up in price to 120 and at that figure the speculator thinks they will stay, he sells out. The broker, therefore, pays to him the difference between the price at which he bought and the price at which he sold the shares, together with his margin, deducting the usual commissions.

Our speculator, therefore, has received from the broker approximately \$22,000, making a profit of over \$10,000. If the stock had gone down instead of up, the broker would have asked the speculator to support

his margins. The broker requires a ten-point margin. As the stock goes down in price the broker knows that he will receive less than he paid for it if he sells. As long as the difference between the purchase and selling prices is less than the amount deposited by the speculator the broker is safe, for by selling the stock he gets the bulk of the price back and the difference he makes good by drawing on the deposited margin. If the stock falls ten points instead of rising, the speculator may still keep the stock by paying additional amounts to the broker. The further it falls, however, the more he has to pay in and there comes a time when he can pay no more. The broker sells the stock "at the market" and the difference is made good out of the speculator's margins.

It will be noticed that this speculation has not helped the industry in the slightest. In fact there has been no investment at all by the speculator. He has never actually held the stock at all. The stock has really been held by the bank which made the call loan. The speculator has merely made a bet that the stock would rise. If he wins the bet, he profits. If he loses, some one else profits. In any case it is practically certain that he never sees the stock he is dealing in.

The case is still clearer when the speculator is selling "short." He may believe that a certain stock, of which he has none, is likely to fall. He orders his broker to sell that stock, and relies upon being able to buy stock at a lower price in order to deliver it to the person to whom his broker originally sold the stock. If the stock goes up instead of down, he must

still buy it in order to make delivery to his purchaser. He buys therefore, at a higher price than that at which he sold and so loses on the transaction. Again there is no investment, for he sells before he owns the stock and as soon as he does own any he transfers it to his original purchaser.

Grain and Produce Speculation — The same methods are used in the speculation in grain and other produce. Men who would not know the difference between wheat and barley if they saw the two together may speculate on the crop markets. Crops are bought and sold before the seed is planted and the total amount of transactions probably far exceeds the total value of the crop when it is actually reaped.

Speculation and the Stability of Prices — Theoretically it is often argued that the speculation in futures tends toward stabilizing prices, that is, preventing the extension of the price fluctuations. The argument is simple enough — we have already outlined it in regard to investment. If prices are high at present and the speculators believe that they will fall, they sell. But the fact that they sell now tends to lower the price. As soon as the price seems likely to increase they buy, thus helping the price to rise. But as they prevent a high price from going higher and a low price from going lower, they are therefore helping to keep prices level. This argument is not true to the facts, however, for it is seldom that a speculator sells in a market which is rising. He usually “follows the market.” If he sees prices falling, he acts on the opinion that they will fall farther and hence helps them to fall. If they rise he seems to believe that

they will rise farther and so he buys, thus helping the price to climb.

As a matter of fact, there cannot be the slightest doubt in practice that, far from helping to stabilize prices, speculation tends to increase the fluctuation, even when it does not do so deliberately.

In the stock market the prices that are paid for stock often have not the remotest connection with the actual value of the stock. For example, we may cite the price of Northern Pacific stock which went as high as \$1000 for the \$100 share during the fight between James J. Hill and E. H. Harriman for control of the road. This price was absolutely unconnected with the actual value of the shares in that railroad company. Again in the famous Boston gas war, the prices of shares had no relation to the normal value of the stock of the various companies concerned.

Psychological factors are of immense importance in the stock market. A stockholder may be thoroughly convinced that his stock is worth what he paid for it. But let him see continuous heavy sales at lower and lower prices and he will feel more and more uncertain. As the prices fall he will gradually feel that he must realize on his holding at once lest their value disappear. This psychological factor is realized by the stock manipulators and it is, unfortunately, no uncommon thing for a valuable stock to be "beared" so that the "bears" may afterwards buy it in at a small price.

Control of Speculation — The control of speculation is extraordinarily difficult. It is admitted that the genuine purchase and sale of stocks is valuable as

society is organized at present. But there is no difference in technique between a genuine sale and purchase and a speculative one. Hence schemes which would effectually control speculation at the same time control investment. The stock exchange has rules which must be observed by its members. But there are always the curb brokers and there are ways of breaking the rules without appearing to do so. We have no space to go into the technique further. The question of the control and regulation of stock exchange gambling is one which must receive careful attention by the public and its representatives in Congress.

CHAPTER XXIV

RENT, INTEREST, AND PROFITS

Distribution as an Economic Problem — Much of our previous discussion has been concerned with the problems of production and exchange. We must now turn to another element in economic life — the distribution of the products. This problem is not to be confused with the difficulty of mechanical transportation. The word *distribution* is used in another sense. When goods have been produced there always arises the question as to the ownership of the goods. When work has been done there arises the question as to the price to be paid for the labor. If we consider labor merely as a peculiar form of goods, then, of course, we can deal with it under the general laws of exchange which have already been discussed. We shall see, however, that labor, or rather, laborers refuse to allow themselves to be considered in that manner nowadays. Indeed it is not only the laborers who refuse. Governments also, in every civilized country, take certain steps to prevent labor from being so regarded. Let us put the problem concretely. Suppose a factory turns out goods which are sold for one million dollars. Suppose further that the cost of the materials from which those goods were made amounted to \$250,000. How is the balance to be divided?

Now in any ordinary concrete case it is simple to enumerate the different recipients. In the first place the laborers (including within the term those who work by brain as well as hand workers) must receive a certain share. Those who supply the capital require a certain amount for the loan. Those who provide the land and buildings upon and in which the goods are made must receive their payment. If anything is left we may provisionally regard it as profits.

This is one aspect in which the problem of distribution may be regarded. It is impersonal, for we are merely trying to divide the proceeds into the ratios suitable to the value of the different factors in production — land, labor, and capital. There is another aspect, however, which is of considerable, if not of paramount, importance. One of the greatest problems which confronts the economic world is the problem of riches and poverty. Why should one man receive a great share of the proceeds of the world's economic efforts, and many others have to accept very small portions? In simple words, why should one man be poor and another rich? We may speak of that problem as the problem of the personal distribution of wealth to distinguish it from the first.

In this latter form of distribution the ethical aspect is of great importance and cannot be ignored. It is too important to be considered in a subsection and will, therefore, be dealt with more fully in the next chapter. The discussion of the distribution between the various factors of production may be considered purely analytically, and the present chapter will deal with the reasons for the payment of rent, interest, and

profits, leaving the wage question for future consideration.

It is important to realize, however, that in discussing these reasons we are not necessarily implying that rent and interest and profits are inevitable under any system of economic organization. The fact is that payments are made to the owners of land, to the owners of capital, and to the owners or operators of businesses and it is important to realize why these payments are made.

Rent — Let us suppose that in a certain community there is available for agricultural purposes 1000 acres of land, and also that the only crop is wheat. If all this land is of equal quality and can, therefore, produce wheat at an equal cost, no question of differences in payment for the land can arise. If the cost of raising wheat, including the payment for the necessary farm labor, seeding, depreciation of implements etc., be 30 cents a bushel, then the wheat cannot be sold for less than that amount (we must ignore temporary and peculiar conditions of different farmers). If it were, the wheat would cease to be produced. Now if the wheat is just sufficient for the needs of the community, the price will be just equal to the cost of production, *i.e.*, 30 cents a bushel. It cannot go above 30 cents, for if it did competition between the farmers would bring it back again.

Our assumption, however, is never warranted by the facts. The land is not of the same quality throughout. If all be capable of producing wheat, the cost of production will vary with different farms. One farmer will be able to produce at 30 cents a bushel,

but another will only be able to raise his wheat at a cost of 35 cents, another at 37 cents, and so on. Now suppose there is sufficient land of the highest quality to produce all the wheat desired by the community at a cost of 30 cents a bushel. Obviously only the best land will be cultivated. The demand will exactly equal the supply. Now suppose the demand goes beyond the amount which can be produced at 30 cents a bushel. Suppose, for instance, that the competition for wheat raises the price to 35 cents. In that case it is worth while for the farmer to cultivate some of the poorer land. This means, however, that those who till the better land gain an extra price, above the cost of their labor, etc., of 5 cents a bushel. In order to obtain this increase farmers will be willing to offer payment for the use of this better land. If 30 bushels to the acre are produced, the farmers will be willing to pay a sum not exceeding \$1.50 an acre for the use of this land. If they make that payment, they still have the opportunity of selling their wheat at a price which will repay them for the cost of production. No one, however, will be willing to pay for the cheaper land, for the price to be gained is only sufficient to pay for cost of production.

This price paid for the use of the better land is known as *rent*. The student will naturally reply to this statement, that rent is paid even for the poorest land that is cultivated and that some of the best land is worked by the owner who pays no rent. Let us examine this. All land upon which wheat can be grown is not cultivated. The reason why some is not used is that the price to be obtained from the wheat

is not sufficient to repay the cost of cultivating it. Also, it is a fact that the poorer the land, the smaller the rent which is actually paid. Now, if the demand for wheat is such that the existing supply from the cultivated land is not sufficient, the price will rise until it reaches the point where the hitherto uncultivated land is worth farming. This means that a rent will be offered for the land which was of the poorest quality actually cultivated before, for this land is now able to produce wheat which sells at a higher price than that necessary merely to repay the farmer for his cost of production. It is obvious that no one will pay for anything which means a steady loss to him. Hence nothing will be paid for the land which merely repays the cost of production of the wheat. This land may be said to be on the *margin of cultivation*, for it is the last to be cultivated. Any land which is above the margin of cultivation earns a rent.

Now as to the non-payment of rent by the owner of high-class land which he farms himself. In selling his produce he receives more than is necessary to repay the cost of production. It is assumed that he will farm the land even if he does not get this additional price. Therefore the increase in price over the cost of production is in the nature of a producer's surplus, and is to be regarded as rent which he pays to himself. Obviously, if he were to relinquish farming himself, and turn the farm over to a tenant, the latter would pay a rent. Whether the rent is paid to the farmer himself, as owner, or by a tenant to the owner, is immaterial.

The rent is a payment made for the inherent qualities

of the land, the qualities endowed by nature. Rent only appears when other lands of poorer quality are forced into cultivation by the demand for the agricultural product.

Urban Rents — Rent is not only paid for agricultural land, however. It is also paid for land in cities where no agriculture is carried on. A man pays "rent" for the use of a building. This use of the word *rent*, however, is not accurate according to our definition. The payment is made not for one reason, but for two. In the first place it is made for the land upon which the building is situated. Secondly, it is made for the use of the building itself. But the building is not a natural product. It gradually deteriorates with age. The payment for its use, therefore, is rather a payment for the building itself upon the installment principle. There comes a time when the building is no longer of any value; it has served its purpose and become worn out. No "rent" will be paid for it then. So the rent paid in a city is still to be regarded as a payment for natural values.

The natural values of urban land, however, are not the same as those of agricultural land. In the city the land value varies according to its situation. If it is to be used for the purpose of selling goods, the rent will depend upon its comparative value as a suitable situation. More will be paid for land in the shopping center of the city than in the outlying districts. Land upon which offices are to be built will command a higher rent if situated near the commercial center. If factories are to be erected, then the higher rents will be paid for those situations which

are close to good transportation facilities. In every case, however, the principle is the same as in that of agricultural land. We may define rent, therefore, as the amount paid for the use of land in excess of the amount paid for land on the margin of cultivation.

Quasi Rents — The idea of economic rent has been extended outside the consideration of the natural values of land. Some of the improvements made in past times have practically been incorporated in the land — ancient irrigation works, clearing of forest growths, and so on. These are not gifts of nature, but nevertheless, they give the land a comparative advantage in production which is somewhat like the gifts of nature and hence payment for this advantage is of the nature of rent.

Again it is sometimes said that a man who has peculiar natural advantages obtains a “rent” for them. In the case of two piece workers, for instance, one of whom is quicker and more accurate than the other, the quicker man will be able to earn more in a day than the slower, so the amount he receives in excess of that paid to the other is somewhat similar to rent. These forms of rent are, however, better known as *quasi rents*.

Interest — The next element to share in the distribution of the produced wealth is capital. Payment for the use of capital is termed *interest*. We have already seen that in the Middle Ages interest was regarded as immoral, and we have examined the reasons for that idea. We must now analyze the reasons for the payment for the use of capital. It has sometimes been argued that interest is paid because

the owner of the capital might have made a profit by using the capital himself and that, as he foregoes the profit which he might have made, he is entitled to share in the profits made by the actual user. There is a great deal of truth in this argument, but it does not quite cover the ground. Many men ask and receive interest for the use of their capital, who would be unable to make any personal use of their funds as capital. Take, for instance, the man with a small savings account. The amount which he possesses may be so small that he is unable to finance a business, and the probability is that he is merely a wage earner himself and so does not provide capital for the business through which he gains his living. Nevertheless he expects to receive interest from his savings bank. Again, a man may have sufficient capital to work the business in which he is principally engaged. His business may be at the stage of diminishing returns. Any addition to the capital, therefore, would mean a return smaller proportionately than that gained by the actual capital. Unless he has some other business to which he gives his personal attention he is unable to employ that spare capital. Hence it would appear that he is not entitled to anything more than the return of his investment when he lends the capital.

There is another reason for the payment of interest, however, which is more complete than the one we have just spoken of. In the discussion of the principle of marginal utility it was shown that there is a great difference in the marginal utility of a present satisfaction and a similar satisfaction in the future. Invariably the present satisfaction has a higher mar-

ginal utility than the future. Now when a person invests his capital he is denying himself a present satisfaction. In other words he is denying himself the satisfaction which he could obtain by buying consumption goods. In the case of the man with the small savings account, it is quite possible that the amount saved could have been used for the purchase of some little luxury which would have been keenly appreciated. Many thousands of these small savings represent real sacrifices of present utilities. It is only right, therefore, that the return of the capital saved should be accompanied by some amount representing the difference between the present and the future utility. Let us take the famous illustration of the man who makes a plane, and lends it to a carpenter for a year. The maker of the plane demands at the end of the year the return of the plane in as good condition as it was when he lent it, together with a plank of wood. The argument here is not that the plane-maker could have used the plane himself during the period of the loan, but that he might have expended the energy used in the manufacture to make something which would have satisfied an immediate want. The carpenter who used the plane has produced goods in excess of the value of the plane itself, and as he has obtained present utilities from its use he must recompense the lender for his abstinence from a present satisfaction.

The real justification for the payment of interest, therefore, is the fact that the lending of capital means an abstinence from present satisfaction and that therefore the lender is entitled to the difference between the present and the future marginal utility.

It may still be argued, of course, that there are certain men whose wealth is so great that they cannot spend anything like the whole of it on consumption goods, and hence there is no real abstinence from present satisfaction on their part. This argument, however, brings in another consideration, involving the question of the personal distribution of wealth. It does not affect the statement that the purchase of consumption goods, *i.e.*, the purchase of present utilities is foregone, and the difference between present and future utilities must be paid for.

The question of the causes determining the rate of interest is too complicated for our present discussion, but a brief statement may be given. In the first place, security for the return of the principal is important. Assuming, however, that security is the same throughout, then the rate of interest will be determined by a sort of average of the estimated difference between present and future utilities. The average will be arrived at to a large extent by the relations between the supply and demand of investment capital.

Profits — In general the term *profits* is used to include the payment of interest on capital, while rent and wages are included in the cost of production. This, however, is merely the colloquial use of the term and we must eliminate these elements. So far, we have considered the returns from the sale of the goods or services as having provided for payment of cost of materials, for rent, and for interest on invested capital. It does not matter, of course, whether the owner of the capital conducts the business himself or not. A certain amount is due for interest. There is, presumably,

a greater return than would be sufficient for these payments, even assuming that labor has been allowed for in estimating the costs of production. The payment for managerial efforts and skill is rightly to be included in the cost of labor, and what is left over constitutes the profits.

If we consider that rent, interest, and wages (including wages of management) have all been paid for, what justification is there for profits beyond these amounts? There are two answers to this question. One is that profits are rightly to be considered as a form of rent. The entrepreneur, that is, the man who undertakes to conduct the business, has a certain amount of ability. The ability of different entrepreneurs varies, however. He who is simply able to make sufficient by his conduct of the business to pay for wages, rent, and interest, is in the position of the farmer on the margin of cultivation. One who makes more than that is reaping the reward of his additional ability. He is thus in the position of the farmer whose land is of better quality and thus a rent is paid.

There is something to be said for this view. There does appear to be considerable similarity between the two positions and hence profits might be said to be a form of quasi rent. There are, however, other reasons which tend to refute the argument. In particular there is the question of risk taking. The undertaker has to assume risks which the mere lender of capital does not take. There are very many unforeseen risks that are inherent in all businesses. Take the case of the cloth manufacturer, for instance. He manufactures cloth of a color to suit the existing ideas.

The fashions may change in a day, however, and new colors may be demanded. The stock of the old colors may be sold at a loss. Again he may be manufacturing in a certain situation where the transportation facilities are good. Gradually these facilities disappear; the mouth of a river silts up, or a landslide occurs on the railroad and for months the track is useless; floods prevent passing of railway trains, and so forth. Again a war may occur which prevents him from obtaining a proper supply of raw materials. All these are risks which he must take.

Most of these risks may be estimated mathematically according to the laws of chance. Actuaries make a profession of estimating such chances. Each individual entrepreneur must also estimate the chances of loss by such risks. He, however, does not as a rule estimate the chances mathematically, but rather makes what we may call a subjective estimate which is invariably greater than the mathematical estimate. In order to be on the safe side he strives to obtain a price for his products which will enable him to bear unforeseen losses when they occur. The community has to bear the losses in fact, of course, but they are as it were distributed over a large area. The increased price relieves the consumer of any responsibility for the losses. If there were no such insurance of risk, it is doubtful whether production, under the present economic organization, could take place.

To make a final analysis of profits, therefore, we may say that they consist of insurance against risk and rent of ability. In speaking of the insurance against risk, of course, we must not take the subjective estimate,

for that is too high. We mean the mathematical estimate. This, however, as we have said, is not the business man's method. He attempts to obtain as much as possible, merely making sure that the minimum is equal to his subjective estimate of the risks encountered in the conduct of the business.

Summary Analysis — The distribution of the proceeds of industry, therefore, may be summed up as follows :

1. Rent, or payment for the use of land.
2. Interest, or payment for the use of capital.
3. Wages, or payment for labor, including the labor of management.
4. Profits including :
 - (a) Insurance against risks.
 - (b) Rent of ability.

CHAPTER XXV

THE PERSONAL DISTRIBUTION OF WEALTH

There are few problems which involve more controversy than that of the personal distribution of wealth. Ought each individual to receive an equal share of the total product, or is his share determined by causes over which society exercises no control? If there exists inequality, as no one doubts, is the inequality growing greater as time passes, or less? If there is a difference, to what is the difference due? We shall attempt an answer to some of these questions in the present chapter.

Statistics — The first difficulty which arises is that of securing accurate data upon which to base conclusions. This involves the use of statistics, and statistics are very difficult both to collect and to interpret. To attempt, in a book like the present, to discuss the statistics of the distribution of wealth is quite impossible. It is well to warn the student, also, that statistics is a difficult science, and none the less so, because many people think that they are using statistics when they are only quoting figures. Instead of giving actual figures and reasoning therefrom, we shall have to content ourselves with stating some general conclusions at which statisticians have arrived after careful consideration of the data obtainable

not only from American, but also from European sources.

The Present Condition — There can hardly be any doubt that the economic condition of every class has improved greatly during the last century or two. We must always remember that there exists a strong tendency to overestimate the evils of the present when comparing them with those of the past. It is commonly said, for instance, that the early colonists of this country lived in a state of rude comfort; a general largeness of living is suggested. As a matter of fact, more stress should be laid upon the rudeness than upon the comfort. The early colonist lived in a constant struggle against starvation. He had no comforts that would not be scorned nowadays by even the poorest. His working day covered the whole of the daylight and often part of the night. Our very awareness of the evils of the present conditions is an indication of improvement. But while we refrain from underestimating the improvement, we must not be blind to the existence of evils. Without detailing the failures of the modern system to secure an equitable distribution of the world's wealth, we may at least mention a few of the more notorious facts. On the one hand we see the growth of personal fortunes which are beyond the wildest dreams of the oriental potentates of old. Cræsus was a member of the lower middle classes compared with some of the money kings of to-day. On the other hand we find that in any great city of the world a large proportion of the population do not receive enough to maintain themselves in a state of bodily efficiency. It is estimated, for instance,

that in order to maintain himself and his family of three children in a state of bare physical efficiency, without allowing for the slightest luxury, even for cheap amusement or an occasional pipe of tobacco, a workman ought to receive about \$1600 per annum. It is further estimated that the average rate of pay for the American workman is less by some hundreds of dollars than that sum, after allowance is made for periods of unemployment. As we have said, the statistics of the subject are essential in making an accurate estimate of the inequalities of distribution of wealth, but for our present purpose we may assume that these inequalities exist and we may now proceed to discuss some of the causes which produce great wealth and, later, some of those which result in great poverty.

The Causes of Wealth — It is well to remember that we seldom find one cause working alone. That does not destroy the value of an analysis, however. We shall not pretend that our analysis is absolutely complete, or that it is always scientifically accurate. There are occasions when it is almost impossible to separate one cause from another. We may, however, consider that there are four chief factors in the production of great fortunes. (1) Accidental causes, or those over which the fortunate individuals who gain the wealth have had no control. (2) Opportunity, often very similar to accidental causes, but differing in that often the individual must exercise considerable judgment in discerning the existence of and in seizing the opportunity. (3) Efficiency, where the wealth resultant is due to the superior capacity of him who

has gained it. (4) Monopoly, where the wealth is due to the possession of monopolistic privileges.

1. *Accidental Causes* — Accidental wealth is often due to the discovery of unexpected mineral deposits. It may happen, for instance, that a man buys a farm, and later on discovers that the underlying earth contains a valuable bed of coal or some other mineral. The value of the land jumps at once to a sum vastly greater than that which was given for the land on the basis of its agricultural value. Before the discovery of the great value of mineral oil, for example, much of the land upon which oil wells have been drilled was of comparatively little value. The fact that the presence of oil is unknown to the individual who possesses the land makes that presence a hidden factor in the value of the land. The accidental discovery of the oil is not due to the efforts of the individual, beyond, perhaps, the expenditure of effort on a few experimental borings, but nevertheless, the discovery of the oil may easily be the cause of a great fortune to the owner of the land. Two farmers have adjacent farms; each bores for water, and one discovers oil instead. His farm leaps in value, while his neighbor's remains stationary, or at most, rises because of proximity to the oil and the possibility of oil existing there also. One farmer immediately becomes wealthy, while the other, should no oil be found, earns his living in the sweat of his brow.

Again in the actual search for minerals, the element of accident plays a great part. This is seen in almost all of the great gold discoveries in California, Alaska, Australia, and South Africa. Some miners will spend

the whole of their lives in the search for gold, with little success. Others, of no greater skill, make a lucky strike within a few weeks of the commencement of their prospecting. The lucky ones make great fortunes, while their equally skillful brethren gain a bare living.

A new development of industry may cause the manufacturer of a hitherto slightly used product suddenly to find that he can command great prices for the commodity he produces. The increase in these prices may be due to causes over which he cannot exercise the slightest control, and yet he gains a great profit. The illustration of this which leaps to the mind is that of the rubber industry. Rubber was known before its great uses as an insulating material in the electrical industries were realized, and the invention of the pneumatic bicycle and motor tire increased the demand and, consequently, the price to a tremendous extent.

Not only industrial, but also social developments may cause property, hitherto of slight value, to increase in value to such an extent as to make the owner wealthy, and this without the slightest exertion on his part. The development of a city in one direction instead of another causes great inequalities in the value of lands which may have been equal before the development. Any great city can provide instances of the beginnings of great fortunes through such increases in land values. It is true that by an exercise of foresight certain individuals can purchase property cheaply in the belief that some future developments will increase its value, but that does not take away the accidental nature of the resulting fortune.

2. *Opportunity* — It is said that opportunity knocks at everybody's door. This may be true, but it is not everybody who is able to unlock the door. The key may be, in the business world at any rate, in the possession of the controller of capital. Many opportunities are lost not so much for want of recognition as of power to take advantage of them. There is a well-known story of a man who claimed that he was once offered the whole of the site of Chicago for a pair of boots. When asked why he did not make the exchange, he replied that he did not possess the boots. We must, therefore, qualify our meaning of the term *opportunity*, by considering it only as effective opportunity. Opportunity is of no value to the man who cannot take advantage of it.

The possession or the control of the means to take advantage of opportunity may be the result of any of the general causes of wealth, but granted its possession, the opportunities which become effective consist essentially of two kinds. First there are the opportunities which arise at the beginning of some new industry — the railroads, for instance. We have already pointed out in a previous chapter that the flow of capital is not steady, but that it moves in a series of jerks or leaps. There is always a time in every new business when the cautious man waits to see the results before he invests his capital. In the meantime the adventurous have seized their opportunity and by the start obtained, have sometimes succeeded in building great fortunes. Provided one assumes the possession of the necessary original capital, the wealth resultant from the seizure of opportunity may be

considered as due to the foresight of the individuals who have recognized and taken advantage of the opportunity. To use the slang phrase of the business world, there are opportunities of "getting in on the ground floor." Most of the businesses in which great fortunes have been made are now built many stories above the ground floor. To change the metaphor, it was easily possible to jump into the train when it was just about to start, but now that it is moving at sixty miles an hour the chances of getting crushed are greater than those of reaching the carriage. Ground floor opportunities nowadays are usually based on the second of the two main divisions, the possession of private knowledge.

The multitude of ways in which private and exclusive knowledge may be the basis of great fortunes cannot all be described here. It is notorious, however, that in the financial world, many, if not most of the great fortunes have been made through the use of private and exclusive information. The methods of the stock exchange have herein played their part. To give a single and common illustration, we may point out the advantage which is taken by financiers who have information of the increased dividend to be paid by some company. They buy the stock of the company before the knowledge of the new dividend becomes public and when the stock is, therefore, undervalued, only to sell when the price rises on the declaration of the dividend.

3. *Efficiency* — The owners of great wealth almost always claim that their wealth is the natural reward of their efficiency. A careful analysis of the sources

of great fortunes, however, tends to show that the element of efficiency, at least in so far as it concerns productive efficiency, does not play too prominent a part. Indeed it depends very greatly upon the actual definition of efficiency and the direction in which the efficiency is applied, which makes for the importance of this element as a cause of wealth. Under present social and economic organization efficiency as a workman will never bring great wealth to the workman. There is greater opportunity for the efficient organizer, but even that opportunity is greatly overestimated. Efficiency in financial manipulation will tend very strongly to build up a great fortune, but that is not the type of efficiency which is usually suggested. If it could be shown that in the majority of cases the efficient workman, teacher, or manager gained great wealth, there might be some reason for placing importance on that factor; but one searches in vain among the ranks of the multimillionaires for the one whose industrial or organizing efficiency is the sole cause of his great wealth. That efficiency plays a part, we cannot doubt, but its part is more obvious when we consider the middle groups of society rather than the extremes.

4. *Monopoly* — The effect of monopoly as a factor in the production of great fortunes is extremely difficult to measure, but its importance can hardly be overestimated. In this consideration we have the advantage of knowing the results of a careful investigation into the causes of the wealth of some four thousand millionaires. The investigation shows that “about seventy-eight per cent of the fortunes were

derived from permanent monopoly privileges and only 21.4 per cent from competitive industries unaided by natural and artificial monopolies. Yet there can be no question that if these 21.4 per cent were fully analyzed it would appear that they were not due solely to personal ability unaided by these permanent monopoly privileges. They were mostly obtained from manufactures, and five sixths of the manufactures of the country are based on patents. Besides, fortunate investment in real estate, stocks, etc., have often contributed to great fortunes where they do not appear prominently. Furthermore, if the size of the fortunes is taken into account, it will be found that perhaps ninety-five per cent of the total values represented by these millionaire fortunes is due to those investments classed as land values and natural monopolies and to competitive industries aided by such monopolies.”¹

The Causes of Poverty — The causes of poverty necessitate a more complicated analysis than those of wealth. Much more attention has been paid by students of sociology to the study of problems of poverty than to the causes and effects of great wealth. In the main, however, there are two groups into which the various causes of poverty may be separated, and different students lay different stress upon one or the other. The general consensus of opinion at present, however, is that the greater proportion of poverty is due to causes closely connected with industrial and social maladjustment, and the lesser amount due to personal inefficiency and thriftlessness.

It is, indeed, often argued that a great amount of

¹ Commons, *The Distribution of Wealth*, p. 252.

poverty is inevitable; that the fundamental basis of human life renders poverty a necessity either in the form of a general low level of subsistence or else in a peculiarly acute form of poverty suffered by a greater or less portion of the population, balanced by a relative comfort on the part of the remainder.

This argument is based on the theory that population tends to increase faster than the production of the necessities of life, and hence, unless there is some force at work which causes periodically great reductions in population, as, for instance, war, pestilence, and famine, the total dividend of necessities will be insufficient to provide more than the bare limits of subsistence for, at any rate, a large proportion of the population.

Turning now to the two main categories of social and industrial maladjustment and personal inefficiency or thriftlessness, we find considerable room for argument as to which of the two should include one or other of the subsidiary causes of poverty. The primary causes of poverty have been well analyzed into seven divisions: 1. Old age and sickness, and the death of the principal wage earner. 2. Unemployment. 3. Irregular employment. 4. Large families. 5. Low wages. 6. Thriftlessness. 7. Inefficiency.

It is obvious at once that these divisions are very closely interrelated. Unemployment and irregular employment are really parts of the same problem, but with sufficient differences to make it worth while to consider them separately. Inefficiency itself may be a cause of low wages, or of irregular employment, and yet, from another point of view, may be an effect of these. Sickness and premature death, also, may

be due to low wages or to thriftlessness. We must attempt to decide, as accurately as we can, whether to place the ultimate blame for the various forms of poverty upon social or industrial maladjustment, or upon the shoulders of the individual himself. To do this, however, involves a depth of study which cannot be attempted here. We may, however, sum up the conclusions which are more or less generally accepted by recognized students of the problems of poverty.

It is undoubted that there is a vast amount of thriftlessness and inefficiency, but it is also obvious that such thriftlessness and inefficiency are not always confined to the poor. If wages are so low that they suffice merely for the bare necessities of life, thrift is impossible without danger of death from starvation resulting. Thriftlessness may exist and does exist in the wealthy as well as among the poor, but as no complaint comes from the wealthy there has been no question of the problem of thriftlessness in that class. Inefficiency is common, also, with the possessors of wealth, but as society does not, *apparently*, have to pay for such inefficiency (or idleness which may be classed as inefficiency), again there has been no problem to discuss.

In fact all of the faults of the poor can be discovered in a greater or less degree among the rich. These problems involve psychological, rather than economic, considerations.

Old Age, Sickness, and Death of Chief Wage Earner—In at least one very careful estimate of the causes of primary poverty over twenty per cent of the poverty was shown to be due to the age, sickness, or death

of the chief wage earner. The existing remedies for the evils due to these causes, as far as the poor are concerned, may be divided into three classes — savings, private charity, and public assistance. As far as savings are concerned, and with these we may include such small amount of insurance as is carried, it can be readily seen that there is no possibility of the amount being very great. The amount earned by those who are near to the verge of primary poverty is so small that any sum saved is a direct reduction of the amount necessary to provide the minimum requirements of subsistence. To devote any of the earnings to saving may easily mean the step below the border line. A week's sickness is often enough to cause the border to be crossed. The earnings, as the earner grows older, become less and that fact alone will cause the development of primary poverty unless the children are in a position to assist. It must be noted, too, that the life on the margin is such as encourages the growth of disease and predisposes the worker to that very sickness which causes his ultimate poverty. Again, the death of the chief worker, when it is not due to accident more or less intimately connected with his work, is often the result of lack of stamina due to malnutrition.

Savings are of little assistance. Private charity, principally that of neighbors little better off, is a mere temporary relief, and the public assistance has often been given in a grudging spirit and with all the appearance of charity — a charity which a large proportion of the poor will refuse as long as they are physically able.

Do these causes of poverty belong to our first category, the maladjustment of industry, or are they due to personal inefficiency? It is obvious that they are intimately connected with the question of low wages. We can, therefore, only answer this question when we have considered that of low wages.

Unemployment and Irregular Employment — The amount of primary poverty due to unemployment and irregular employment is variously estimated. That it forms a very important factor, however, no one denies. Irregular employment does not necessarily mean poverty. A barrister or a civil engineer often works irregularly, but is not reduced to poverty thereby. Poverty is the result of irregular employment at low wages. Unemployment is merely an extension of the question of irregular employment. Few workmen are permanently employed, and the only essential difference between unemployment and irregular employment is the tendency of the former to exist for longer periods, which follow on periods of comparatively steady work. Both, however, are largely due to industrial maladjustment. It is true that there exists a class which is called the unemployable. But whether this class is not the result, itself, of industrial maladjustment is a problem worth discussing. There is no doubt that, if it is not entirely due to poor organization of industry, at least poor organization has a considerable amount to do with it.

Low Wages — We now come to the consideration of the principal cause of poverty, low wages. We have already seen that the question of wages is intimately connected with the other causes of poverty.

An English Justice of the Peace toward the end of the eighteenth century made a remark concerning the wages paid by cotton manufacturers of Manchester, which is still applicable. He said that if the cotton manufacture could not be carried on unless starvation wages were paid, then the cotton manufacture had no right to exist. It has since been proved conclusively that this industry can be successfully carried on even when much higher wages are paid. To make a dogmatic assertion of the right of a workman to a living wage may seem to be encroaching upon the realm of ethics, but the economist cannot always make the distinction between his own science and that of ethics. Any industry which is impossible without the payment of low wages, has no justification. From a social point of view, the industry exists to supply a social need. If the measure of its social necessity is so small that the returns do not justify a wage sufficient to cover the necessities of life to those who provide for the needs, then the industry is not of sufficient value to warrant its continuance.

Low wages are an inevitable source of poor labor and discontented laborers. There is an obvious, but erroneous argument that labor costs are synonymous with wage rates. This idea still exists in spite of the thousands of cases where it has been disproved. On the one hand we have industrial leaders declaiming against the competition of foreign pauper labor and on the other the same individuals stating that the American workman can turn out much better finished goods than the foreign workman and several times more quickly. It must be realized that high

wages almost invariably pay the employer, provided his organization is good. This question will be considered further in our discussion of labor problems.

Another effect of low wages is, however, to depress the condition of the wage earner to such an extent that he cannot be efficient. His inefficiency is often directly or indirectly due to his low wages. Naturally the low-paid trades only attract those who are either unskilled or who have failed at the trade which they know, and in so far we may say that inefficiency encourages low wages. Even if that be true, however, it cannot be said that inefficiency *causes* low wages.

And now we come to the final cause of poverty — the thriftlessness of the poor. To describe thriftlessness as a cause of poverty is to put the cart before the horse. Thriftlessness is the inevitable result of poverty, particularly of primary poverty. The primary poor have no further to fall; they have, as it seems to them at least, no chance to rise, and hence their lives become an example of fatalism. They live from day to day and the present is always with them. It is the immediate satisfaction that is required and the future is discounted at a heavy rate. It is said that the poor waste their substance in drink. Possibly the charge is true, and we have no wish to minimize the evils of drink. But we must at the same time recognize that very often poverty is as much the cause as the consequence of drink.

Sufficient has been said now to show that our main conclusion as to the causes of poverty is that poverty is due in a preponderating measure to social and industrial maladjustment. But we have yet to answer

the question why this maladjustment is allowed to remain. We presume the belief that a greater equality of income would be a benefit to society as well as to the great bulk of the individuals who compose it. Why is not the equality attained? To answer this question we must consider the incentives to wealth and to work.

The Incentives to Wealth. 1. *The Will to Live* — The fundamental incentive to wealth is the desire to escape poverty, which is itself a desire to escape death. Talleyrand, the great French statesman, replied to an applicant for a position who used the old phrase, "a man must live," "I don't see the necessity." This cynical utterance has been repeated with great approval by the would-be witty and by those who are themselves in a good position, and who believe in the inefficiency theory of the cause of poverty. As a matter of fact, however, the old expression is true. A man must live, if he is to continue being a man. It is an individual belief and society is composed of individuals. Under present conditions, the possession of wealth is the guarantee of life. Its lack is the signal for death. In a primitive society death was always near, but with the growth of industry and the gradual building up of modern industrial organization, the approach of death has been postponed. But it has not been postponed for all alike. Apart from the accidents of life and the inevitability of death, its approach is still determined by the amount of wealth the individual has obtained. Hence the inevitable struggle for wealth. It is the will to live made conscious and intellectualized. The primitive savage

indulged in no speculations as to why he sought for food, or why he stored up those possessions which were of value to him. Nevertheless, the will to live was there. All that has changed since that era is the degree of intelligence displayed in satisfying the will to live. We have based our society on the individual possession of wealth, and all, in greater or less degree, still seek to gather wealth in order to postpone the evil hour when the wealth shall be of no more use. Not only for ourselves do we seek the wealth, however. The parent seeks to prevent the poverty of his child and tries to guarantee security against want by increasing his own struggle for wealth. Security against poverty is the great stimulus to the search for riches.

2. *The Acquisitive Instinct* — But the pursuit of wealth is assisted and developed by the acquisitive instinct. In some cases the latter persists after the security against poverty has been attained. In extreme cases the result is the production of the miser, but there are many degrees. The habit of acquisition remains after the original aim has been satisfied, and the pursuit of wealth for wealth's sake is the result.

3. *Emulation* — While we are safe in considering the will to live as the fundamental cause of the pursuit of wealth, it is not the only cause. For, the first desire being satisfied, others develop. The spirit of emulation has a strong influence. We like to do as well as our neighbors. In fact we go further; we wish to appear more prosperous. Living in a society in which wealth is the index to social position, we find that the desire for social importance itself produces a further incentive to the pursuit of wealth. This is

evidenced in all ranks of society, but nowhere is it more strongly developed than in the wealthy classes. Here emulation turns to ostentation and extravagance. The pursuit has been so successful that the problem of the expenditure of the acquired wealth arises. The owner of the wealth actually has to devise new desires to satisfy, in order to expend what he has acquired.

4. *The Will to Power* — Finally, we come to an incentive which is almost as important as the will to live — the desire for power. It is not given to all to have the dominant instinct or the ability to put the instinct to effect. There are those who have little desire to govern others, but, on the other hand, there are many who constantly desire the power to rule and to control. Under modern conditions the power to control the actions of others lies essentially in the hands of those who possess wealth. Wealth is a means of power and hence those who strongly wish to exert their dominant instinct must first seek wealth.

Now all these desires are inherent in humanity. That they have led to abuses and inequalities is undoubted, but that does not lessen their importance. Nor does it necessarily follow that the desires must be eliminated before we can secure the removal of the evils whose existence we admit. It has been argued, however, that those evils are the natural result of the desires and that they are, therefore, inevitable. But this is by no means true. It is only true if we premise a society like the present in which wealth is the insignia of power and importance. Now it is not true, as has often been supposed, that if the possession of undue wealth were not permitted, the stimulus

to exertion, whether of hand or brain, would be lost. A brief analysis of the incentives to work will serve to remove that idea.

The Incentives to Work — It is true, of course, that the incentives to industry sometimes coincide with the incentives to wealth. This is particularly so in regard to the first of those incentives — the will to live. But, having granted that primary similarity, we must also admit that work is a human necessity. The expression “the right to work” has long been a commonplace among working men, but the sense in which they use it is that of the right to gain a living through work. That is not the sense in which we speak of work as a human necessity. The desire for activity is elemental, and idleness is only pleasant as a relief from activity. Even a schoolboy will tire of too long a vacation and it will be a relief to get back to the discipline and industry of the schoolroom. We overestimate the importance of idleness because we have too little of it. To the man whose life is a constant round of more or less uncongenial work, the idle period seems like a brief taste of heaven. But even those who have the opportunity to be idle constantly are nevertheless nearly always seeking for some outlet for their energies. It is true that they may find that outlet in sport or in some of the more inane activities of the idle rich, but not necessarily so. These follies may show a lack of intelligence, but they do not show that work is distasteful. They are merely an echo of the general feeling that work is unpleasant, a feeling generated by the fact that most of us have too much of it, and a great deal of it is needlessly unpleasant.

“**The Joy of Working**” — Again, much of the pleasure of work is lost at present through the fact that so much work is poor. There is no pleasure in doing poor work, but, on the contrary, there is a great delight in doing good work. Compare the attitude of the workman in a shoddy furniture factory where everything is sacrificed to speed and cheapness, with that of the workman who is doing a high-class job with the best materials and with sufficient time allowed to produce his best work. Listen to the conversation of a couple of engineers off duty. Almost invariably it will turn on the work they have been doing. There is contemptuous scorn for a set of badly constructed and erratic engines, but there is also the almost paternal pride in a good set. Kipling’s “McAndrews’ Hymn” is not all imagination. The feeling exists to a greater or less degree in all of us. The London bus driver spends his holiday riding on another man’s bus.

Society has, up to the present, made too little use of the spirit which animates the man engaged in good work. Too much is sacrificed to a totally unnecessary cheapness, and to overexertion on the part of the worker. Even the enthusiast will tire if the subject of his enthusiasm is too much with him.

We may be quite sure, then, that even if the incentives to wealth did not exist, work would go on, and very likely much better work through the stimulus of the pride in the work done, and the joy of working.

The Creative Instinct — There is a further point which must not be omitted, and that is the effect of the creative instinct. If there is one form of work-

ing which is not influenced by the desire to accumulate wealth, it is the creative form. The artist produces his pot boilers to earn a living, but his real work, the work on which he spends most of his time and all of his best efforts, is done in the joy of a new creation, an expression of himself which is independent of his social or financial position. And by the artist, we do not necessarily mean only the painter, sculptor, or musician. The creative instinct is in all of us to a greater or less degree. It is the driving force of the inventor, but it is also the stimulus of the craftsman no matter what his craft. It is not necessary even that the craftsman should produce the whole of the finished article. The pride in the working may only extend to his particular product, but it is there.

The Organizing Instinct — The organizing instinct is only one aspect of the creative. There are men who are born to create order out of chaos and whose special pride it is to do so. These are the born organizers and it is waste of social material to lose or to abuse their powers. There can be little doubt that it is not entirely the rewards of the organizer which induce him to work. Provided the initial security against poverty is attained, then he would do the work of the character for which he is best suited rather than not work at all, or work at some less congenial but more profitable occupation.

The Dominating Instinct — The same is true of the dominating instinct. The men who possess in the highest degree the will to power and who have the requisite ability to exercise that power will inevitably secure the controlling positions. At present they

do so by attaining wealth, since by the possession of wealth alone are they able to realize their power. It is obvious, however, that many of them have far more wealth than they can possibly use and indeed sometimes more than they desire, but as power depends upon wealth they seek more and more. The present situation is unfortunate in that it often gives power into the hands of those who have merely the money-making gift, which is not by any means the same as the creative or organizing power. If the domination of those who are not really the possessors of the directive and controlling ability were eliminated from society by the removal of the wealth stimulus, society would be an infinite gainer.

In this chapter we have tried to show that the great inequalities of the personal distribution of wealth are not necessary to the continuance of industrial society. At present wealth is the one means of satisfying some of the strongest of human instincts. There is little doubt, however, that these instincts would still be in operation were the wealth stimulus removed. The feeling that gross inequalities of wealth possession involving lavish and wasteful expenditure on one hand and semistarvation on the other, are a disgrace to civilization, is growing. The remedies for the existing conditions must remain for discussion in a later chapter.

CHAPTER XXVI

THE REMUNERATION OF LABOR

The Meaning of the Word *Labor* — Like so many other words which are used in common speech, the meaning of the word *labor* varies according to circumstances. In the most accurate sense the word signifies the human effort in the production of utilities. This is a much wider meaning than is commonly given to the word *labor*. In ordinary speech it usually means manual effort only. When we speak of a laborer we naturally understand a person who works with his hands. No one thinks of the general manager of an insurance company as a laborer; nor is the term usually applied to a consulting engineer or a doctor. Yet each of these is using his effort to produce utilities. In the distribution of the national dividend (*i.e.*, the total amount produced within the nation in a definite period of time, say a year) labor must have its share as well as capital, rent, interest, and profits. The management of a business is just as much labor, in the true sense, as the work of the mason and carpenter.

There is a strong tendency nowadays for the manual workers to realize their community of interest with those who work by brain instead of by hand, but nevertheless, there is much justification for the common meaning attached to the term. It has been recognized

that the manual worker is at the bottom of the social scale as well as of the economic, and the problem of keeping him contented — which is the aim of one class, or of providing him with an adequate share of the world's products and the means of a full development of his capacities, has laid such a stress on his particular form of labor that it is perfectly natural to restrict the term to that form. The fuller meaning, as we shall see in a later chapter, is of great importance in discussing modern problems, but in the meantime we shall consider labor as meaning that form of work which deals mainly with physical effort and leave out of consideration the purely mental effort.

Labor's Part in Production — It is customary to speak of capital as if it were a separate and almost human entity. Capital is, however, merely a form of a product. By itself it is not a producer. Capital is a tool, and the tool is useless without the hand to wield it. The human effort is the prime moving force and without this all the capital in the world is absolutely useless. At the same time, capital, while it is undoubtedly the result of labor, is the result of past labor — labor which has been employed in the producing of a means to an end. Labor is not exactly useless without capital; it is inefficient. The inefficiency, however, at any rate as far as the satisfaction of the needs of the modern world is concerned, amounts practically to uselessness.

Without the stored-up labor in capital modern production would be impossible. Now the facts are that labor is separated from the ownership of capital. This is not necessarily so. Of course a man may own

all the tools and machinery which are necessary for his own particular occupation. A dentist may, and usually does, own his forceps, drills, and other apparatus. But there is nothing inherently necessary in labor owning its capital. The ownership is usually vested in some person or group of persons who do not themselves perform the labor which makes use of that capital.

Hence it is worth while, in practice, to consider the actual share in production which is due to labor, apart from the share due to capital.

It is quite impossible to apportion the share due to labor in any scientific way. In practice one is just as necessary as the other, and in different occupations the ratio of capital to labor varies within very wide limits. In an industry like the manufacture of cotton an enormous amount of capital is required. In simple agriculture the proportion of capital (using the term principally as applying to fixed capital) is comparatively small.

Labor as a Commodity — Labor, however, is not the inanimate entity that capital is. Labor presupposes the laborer. This fact is of great importance in our study. There was a tendency not so very long ago to speak of labor in exactly the same terms as we speak of steel manufactures or of wheat. It was regarded as a commodity that is bought and sold and subject to all the laws of exchange which we have studied in previous chapters. Hence we still use such expressions as *labor market*, *supply and demand for labor*, and so forth. The laws governing the remuneration of labor have been to a very large extent based upon the treatment of labor as if it were a form

of goods. We shall have to examine some of these laws, but before we do so, it is necessary to understand fully that labor cannot be treated exactly as a commodity.

The problem with which we set out, the finding of the best means of utilizing the economic resources of the world, did not imply that the solution was reached when one or two, or even a large group of individuals received all that their demands required. Rather it meant that all the individuals in the world should be satisfied as far as the resources of the earth made possible. To treat the laborer, therefore, as merely the possessor of a certain quality which is necessary to the welfare of his fellows, although incidentally necessary to himself also, is unsound. It is to follow out the Greek idea that culture was the prerogative of the wealthy, or at any rate, of those who were sufficiently possessed of the world's goods to be free from the necessity of working for a living. It is to accept Nietzsche's idea that only the favored few are capable of the highest development and that all others are merely means to the securing of that highest development. In simple words, the laborer, if labor is considered to be a commodity, is regarded in exactly the same manner as one regards horses and cattle.

Now while we do not argue that all are capable of the same heights of development, nevertheless, we assume that each is entitled to the privilege of securing the highest development of which he is capable, and that the welfare of the race is not determined by the attainments of the few, but rather by the high average of culture attained by all its members.

Wage Theories. 1. *The Iron Law*—With this preface, then, we can now turn to the consideration of some of the theories suggested to explain the remuneration of labor. It has been assumed that labor is subject to the laws of supply and demand. The greater the supply of labor, coupled with a constant or decreasing demand, the smaller the share which the individual laborer could obtain. Given a certain proportion of laborers to a certain demand, it followed that there was a definite limit to the average share of the product received by the laborers. Let us take an example. Suppose there is a demand for fifty laborers and a production which warrants a total payment to labor of \$1000. The amount that each laborer can receive is \$20. Of course some may receive more than this amount, but if they do, others must receive less. Now suppose that, without increasing the sum available to pay the laborers, that is, without increasing the demand for labor, the number of laborers is increased to one hundred. Obviously the amount which each can receive on the average is only \$10.

On the other hand, should the demand for laborers increase and the number remain constant, the individual laborer's share would increase. Things remain the same when the demand for labor keeps pace with the supply. The question then arises, what is the cause of the demand for labor. Labor in itself is not desired—it is merely a means to an end. It is the product of labor which is required. But the product of labor is limited by the earth's resources, coupled with our knowledge of the means to make use of them. The supply of labor is determined largely by the increase

or decrease of the population. At the time in which the theory we are now discussing was most strongly held, the food production of the world was working under the law of decreasing returns. Population, however, tended to increase at a faster rate than food production. Hence a time arrived when the means of feeding the increased population was insufficient for its needs. Some must starve. The starving, however, would struggle to obtain as much as possible, and would offer themselves for wages which would suffice to keep body and soul together. The tendency, therefore, was to force the wages down to the bottom level of subsistence. If the laborer received less than sufficient to feed him, he died and so starvation reduced the population down to the level at which there was sufficient food to go around, but only sufficient.

Any improvement in the means of obtaining an increased supply of food was, it was assumed, immediately followed by an increase in the population. Hence wages tended to fall, by this very pressure of population on the means of subsistence, to the level at which subsistence was just possible.

We have stated this argument as if it actually represented the facts. At the beginning of the nineteenth century, in England, at any rate, where the theory was developed, the facts did seem to justify the conclusion. But before the century was far advanced, the facts changed. Wages were not forced to the level of subsistence. The "iron law," as it has been called, was broken, and therefore, invalid.

The theory was not quite abandoned, however. It was mitigated by changing the term *level of sub-*

sistence to the words *standard of living*. The new law was expressed somewhat as follows. Wages tend to fall to the level which will provide for the subsistence of the laborer at the standard of living to which he is accustomed. As a Socialist writer put it, "If the working man believes that bottled beer and chops are necessary for subsistence, his wages will be sufficient to provide him with bottled beer and chops."

This, however, did not affect the principle of the argument. All that was changed was the meaning given to level of subsistence. Under this theory, wages are still dependent upon population. From the logic of the argument there is no escape. If we admit the premises, we must accept the conclusion. But are the premises correct? It would seem from experience that they are not. In the first place, when the theory was first formulated, the conditions of the time lent a strong color to the argument by which it was supported. The population was increasing by leaps and bounds. At the same time the production of food was, although increasing, increasing at a much slower rate. There was no suggestion that the old countries could draw to such an amazing extent as is now the case, on the New World for their food supplies. Hence it appeared as if the facts actually justified the theory. But as the New World began to be drawn upon for food supplies — as the prairies of America were gradually and increasingly cultivated, and as the facilities for sea transportation improved, the food difficulty seemed to be solved. Nor has population increased to the extent that was anticipated. There seems to be a strong tendency for the increase

of population to be less under prosperity of the individual rather than greater. The larger families are seen in the poorer portions of the population, not in the more well-to-do.

The theory must, therefore, be abandoned. We know that there is sufficient knowledge of the earth's resources, and sufficient resources to feed adequately all the population of the world. The problem is rather to discover how the knowledge may be made use of to the best advantage, and how the product may be more equitably distributed. Labor has come to demand something more than a mere subsistence wage. It demands the "living wage," and the interpretation of the word *living* is becoming more generous with each advance in the general standard. The modern demand of the laborer is that he should have sufficient share of the productions of the world to develop himself to the fullest extent; that his labor should not fill all the hours of waking, but that he should have sufficient leisure to make life worth living. This demand is a worthy one. Can it be met? That is a problem which must be discussed in a later chapter. Meanwhile we must turn to another aspect of the problem of the remuneration of labor.

Money and Real Wages — It is a commonplace to say that the amount of money a man earns is no satisfactory indication of the remuneration of his toil. It may quite easily happen that wages tend to increase steadily as far as money amounts are concerned, but that the recipients become just as steadily worse off. Suppose, for example, that a man earns \$100 a month. It would appear that a rise of

\$10 a month would improve his position exactly ten per cent. But suppose that, at the same time prices advance twenty per cent. In this case the \$110 at the new price buys only about ninety-two per cent of the goods that the \$100 bought at the old price. The wages of the workmen have therefore actually fallen in value, although nominally they have risen.

As we have said, this is a commonplace, but it is just one of those commonplaces which are easily overlooked. We become so accustomed to dealing in terms of money that we are inclined to overlook the fluctuations in the value of money. In any discussion of increases and decreases in wages, we must be careful to think of real wages, that is, the purchasing power of the wages, rather than the sum of money received in a certain time. To make the matter plainer still, let us suppose that a man is in receipt of sufficient wages to purchase all he requires but not sufficient to save anything. Now suppose his wages are increased, in terms of money, ten per cent. If prices remain stationary he should be able, without increasing his expenditure, to save that ten per cent increase. Should prices have risen, however, to such an extent that he cannot save at all, but can just maintain his old habit of life, neither increasing the amount of goods he purchases nor decreasing them, then it is obvious that he is in reality only earning as much as before. And should he be forced, by the rise of prices, to give up some of the things he used to buy, his actual, or real wages have fallen, in spite of the fact that he receives ten per cent more money.

The Method of Payment — Of almost as much importance to the wage earner as the amount of his earnings is the manner in which he is paid. We may distinguish four different methods.

1. *Time Wages* — The commonest form of all wage payments is the payment by time. All salaried workers are paid not according to how much they do, but according to the time they spend in doing it. If two bookkeepers are paid a salary of \$150 a month each, no estimate of the amount of ledger work, posting, and checking is considered in making the payments. It is assumed that each is doing the normal amount of which he is capable. If he does not do so, in all probability he will soon be seeking another job. Of the two one may be a much quicker man than the other. This does not affect his wages. He is paid so much for a month of his effort.

Again a workman is paid sixty cents an hour for his work. Two workmen at the same rate of pay may produce totally different amounts of finished work. One may be twice as quick as the other and if he be as accurate, he is producing twice the amount for the same number of cents. In time payments, a certain average of work is presumed, and the rate of pay is determined largely according to the standard of living. That is to say, if the general standard of living for a particular class of workman requires an expenditure of say, \$100 a month, the time wages will be such as, on the whole, to provide an income of \$100 a month to the workman. Now in all the group earning this time rate, there will be variations between extreme efficiency and extreme inefficiency.

The great bulk, however, will tend to average their production.

There is little stimulus to great exertion in a time rate. Nevertheless there are great advantages in this kind of payment. In the first place, for many kinds of work it is impossible to pay in any other manner. Take, for instance, the bulk of clerical work. There would be a very great difficulty in paying stenographers on any other basis than time rates. A business man must have his stenographer there all the time. At times she will be busy, at other times idle. The number of letters written one day will not be the same another, and so on. The employer demands a certain amount of effort. If he thinks that his staff has too many idle periods, he decreases the staff, so that, on the average, each does a day's work.

Again suppose it were suggested to pay laborers so much a cubic foot of earth removed in an excavation. Some workmen might do all their work in soft earth, and so be able to remove many cubic feet. Others, with an equal expenditure of effort, working in hard or rocky ground, would not be able to do nearly so well. Now as it is quite possible that the strata through which the laborers are digging vary with every foot they dig, it is impossible to pay them on any other basis than a rate for a period of time, and it will be the duty of the foreman to see that each exercises his fair share of effort.

2. *Piece Wages* — Another method is to pay, not according to the time spent, but according to the amount produced. There are many industries in which this is the usual method. Take the potteries,

for instance. Here there is a long schedule of prices to be paid workmen for performing certain pieces of work. So many cents a plate of a certain size, or a cup or dish, or whatever they may be producing. Riveters in shipyards are sometimes paid so much a rivet driven, and again sometimes so many cents an hour.

The piece-rate method has the advantage of allowing the highly skilled or unusually energetic the power to reap the advantage of their skill or energy in the shape of greater earnings. On the other hand, the weaker or less skillful receive less. It is objected, however, that rates tend to be decided upon the work done by the men of highest skill. The earnings of a highly skilled man, coupled with the average amount necessary to maintain him in the standard of life to which he is accustomed, form the basis of the piece rate. As the highly skilled are the minority, the majority must either work longer hours, or else suffer in decreased earnings.

It is sometimes found, upon the introduction of piece rates, that the production is very much greater than was the case when time wages were paid. Hence the actual amounts received by the workmen become much greater than formerly. Whenever this is the case, it almost invariably occurs that there is a cut in the rates. The cut tends to bring wages back to the amount earned under the time-rate system. This is partly the reason why many trade unions object to the introduction of piece payments. They claim that all that happens is an increase in the amount of work done, without a corresponding increase in the pay.

On the other hand, it sometimes occurs that the men protest against the introduction of time rates. Here it is claimed that by speeding-up machinery, the workman produces more work, but reaps no benefit from his increased production.

It is claimed on the whole for piece rates that they tend to increase production. Against them it is argued that the workman is liable to undue pressure in order to earn the wage which he regards as necessary. The time wage is blamed for keeping production at a minimum, while those who favor it often say that it prevents the average man from being imposed upon.

The truth is that it is impossible to say that either is bad or good in itself. The case of each individual occupation must be settled by itself.

3. *The Bonus Systems* — Many attempts have been made to combine the two systems so as to get the best out of each and to eliminate the evils of both. One system is to pay all men, no matter how much their production, a standard rate. By an investigation into the average time taken in the past for a particular job, however, a standard time for a piece of work is set. Any workman who passes that standard receives an extra payment in the form of a bonus for his increased production. In this way, both time and piece rates are combined. There is an infinite variety of bonus systems, however, and that indicated here is merely one of the simplest. It is worth while, however, to outline one of the schemes which has been criticized very severely and also highly praised. In this system, instead of merely averaging from past experience to

find the time in which a job ought to be done, a careful scientific investigation is carried out to see which is the best way to do it. The best arrangement of the machinery is first considered. Then a skilled workman is set to perform the task, every movement he makes being noted, and the time taken recorded. By a study of his actual movements all waste motions are seen. These are eliminated and the workman again set to perform the task. When it is seen that every motion is essential, and there is no waste, the final time is recorded.

As it is obvious that the time taken by a skilled workman under these conditions is hardly the same as the time taken by the average man, a deduction is made from the amount of production required in the standard time, say twenty per cent, or even, in some cases, fifty per cent. The time thus arrived at is the standard for this job. Then each workman is taught the method of production arrived at by this investigation. He is paid on a time basis as a minimum, but he receives a bonus when he reaches the standard time, and another bonus when he passes it.

There is no doubt as to the success of this system from the point of view of production. There have been most wonderful increases made by its means. The effect upon the workman, however, is not so satisfactory. There is good reason to believe that the increased work is not obtained without a certain increase in the effort. The workman becomes rather a wonderful machine than a human being. If the hours of labor are appreciably shortened so as to offset the greater intensity of effort, no harm may be done,

but if the system is adopted without change in the hours worked, there can be little doubt that a great deal of harm is done.

4. *Profit Sharing* — The final method of payment is to supplement the wages by allowing the workers a share in the profits. This method, however, will require more discussion than we can give space to in the present chapter. It will be dealt with later on and is here only mentioned in order to complete the account of methods of wage payment.

CHAPTER XXVII

THE ORGANIZATION OF LABOR

The Origin of Labor Organizations — There is a common but erroneous belief that trade unions have their origin in the old trade guilds or craft guilds. This is not the case. The craft guild was an organization quite distinct in its aim from the trade union. It was designed to include every one in the industry, whether craft-master, journeyman, or apprentice; it regarded the craft as a unity. The trade union, on the other hand, is an organization definitely based upon the belief that the journeymen, the common workers, cannot protect themselves against the employers unless they act as a body. The origin of modern labor organization lies in the realization of an antagonism between the laborer and the capitalist. Although we can trace the beginnings of trade unionism to periods much earlier than the end of the eighteenth century, it was the conditions resultant from the chaos of the industrial revolution which brought about the great combinations that have grown to be of such importance at the present day.

The theory of *laissez faire* which, in the early part of the nineteenth century, held full sway, emphasized the value of individual liberty. The conception of individual liberty, however, did not take into account the fact that mere permission to do a thing is not the

same as granting power to do it. Theoretically, under the laws which were so well thought of by the early individualists, any man had the right to engage in any industry he pleased, conduct that industry as he pleased, pay his workmen what he pleased, and so forth. At the same time any one also had the right to change his employment when he wished, to bargain for higher wages, to refuse to work for less than a certain sum, and to go where he pleased in search of work. In practice, however, this liberty was illusory. The owner of capital was in the better position almost invariably. What was the use of the workman exercising his right to change his employment, when the change could not result in an improvement? In case he refused to work for less than a certain wage, he was powerless to enforce the payment of that wage.

The much praised freedom of competition of laborer with laborer tended inevitably toward the forcing of the wages of the laborer and the conditions of his labor to the lowest level.

We have not the space in the present discussion to give any account of the evils which unrestricted competition of laborer with laborer and manufacturer with manufacturer led to. As an illustration, however, it may be mentioned that in the early years of the nineteenth century in England medical testimony was called and gravely discussed to prove whether it was unhealthy for a child of eight or ten to work for fourteen hours a day.

The fact was that laborers could not hope to improve their condition by individual bargaining, relying upon the generosity of their employers to see that

they received sufficient to keep them and their families from starvation. There were two alternatives. Either the laborers were to become mere serfs, cared for by their masters in the same way that cattle and horses are cared for, or else they must combine and add to their bargaining strength by union.

The early attempts at union were most bitterly fought. Every weapon that could be suggested was used against the unions. A parliament elected on a restricted franchise, corrupt, and biased against all industrial agitations, fearful of outbreaks or revolutions, passed law after law prohibiting this, that, and the other group of workmen from combining to secure increases in wages.

Not content with passing individual laws at the solicitation of manufacturers in certain industries, these laws were codified into a solid group affecting all workmen, no matter what trade they carried on. The common law was invoked to render workmen liable to be sentenced for conspiracies in restraint of trade.

Out of this chaos of trade which tacitly permitted employers to combine, but persecuted labor combinations, was born the struggle to obtain legal recognition of the right to organize.

The Right to Organize — It is worth our while to consider the importance of this right on the part of labor to organize itself. We have already seen that the tendency of all our modern industrial development is toward the elimination of competition. This is so in the case of labor, as in most other cases. The individual laborer who comes to an employer asking

for a job is, as a general rule, in a poor situation to bargain for his wages. He must take what is offered. It is only when he is backed by an organization that he can insist on a minimum wage and definite standards of treatment.

The right to organize implies the right to do collectively what is permitted to be done by the individual. Any individual may, if he wishes, refuse to work for any other individual. If John Jones does not like to work for Tom Smith, he does not need to, and it does not make any difference if Tom Smith happens to be Thomas Smith and Company, Inc. This individual right was acknowledged in the *laissez faire* period. But what was right in the individual became wrong in the association. The association is powerless, however, unless it is granted the right to make use of its collective importance. It makes very little difference to Thomas Smith and Company, if John Jones resigns. But it makes a very great difference if John Jones is accompanied by all of his fellow workmen. In other words, when it comes to a trial of strength, the association has a power which is not possessed by the individual. The right to strike, therefore, is essential to the organization of workmen, unless there are other and more satisfactory methods of gaining improvements in wages and conditions of labor.

This involves, of course, the right of the employers to organize as well. But no one has ever questioned this right; it has been taken for granted. The point we wish to emphasize is this; if it is assumed that conditions of industry are to be governed by the

bargain made between the employers and the workmen, it is only fair that the parties should be in nearly equal positions in settling the bargain. To give either party an invariably preponderant power is bound to result in oppression of the other.

We are now in a position to define the meaning of *trade union*. We shall find, however, on further examination that the varieties of trade unions make it necessary to give subdivisions which must be further defined. As a general statement, we may say a trade union is an organization of workmen which has for its primary object the obtaining of increases in wages and the improvement of conditions of labor.

The Methods of Organization — Experiments without number have been made in the organization of trade unions. Hardly any scheme which has been suggested for the conduct and improvement of democratic government has not been tried. It is difficult to say that any particular trade union is typical. There are, however, two distinct and broad types which are worthy of consideration in the present brief discussion.

There is, first, the *craft union*. In this case the workmen are associated with one another by similarity of work. The carpenters form a group of their own, each knowing exactly what difficulties occur in the carpenter's work, the conditions which should be improved, and so forth. The bricklayers form another union, which is concerned purely with the work of bricklayers. It is in this sort of union, which is confined to the members of a particular craft, that the similarity is seen between the trade union and the

craft gild. The difference is obvious, however. The trade union is definitely an organization of employees, as distinguished from employers; the craft gild included both. As the association grows in size, the trade union tends to affiliate with similar organizations in different places. But it is important to remember that it affiliates with organizations in the same trade. The machinists union of one city affiliates with the machinists union in another. There is no suggestion of an association of painters and blacksmiths. The trade lines are kept distinct.

National Association — As it comes to be realized that national associations are of great value, in other words, as the organization becomes nation-wide in its scope, the dependence of one trade upon another is more strongly realized. At the time of writing, for instance, a strike of a certain number of boiler makers and machinists, the actual number of strikers numbering perhaps two or three thousand, has caused the idleness of over thirty thousand workmen. In order to produce common action, some central organization associated with all grades is required, so that all industrial workers shall not be at the mercy of a small group, and at the same time the small group in what is deemed a right cause shall have the support of the whole. This association is formed on the principle of a federation. Each trade union is autonomous as far as its peculiar affairs are concerned. But each is compelled in matters affecting all to submit to the orders of the central council.

The national organization becomes a federation of self-governing unions, each with its own national council.

The tendency is all the time toward centralization. Perhaps the best analogy is that of the government of the United States itself. Here we have a series of forty-eight states each with its own central organization, in the form of legislative assemblies with their officials and executive staffs. All purely local matters, that is, all matters that have to do with those within the state alone, are settled according to the will of the central organization. But all matters that have to do with inter-state affairs are settled by an organization controlling the action of the states — the Federal Government.

The difference between the government of the states and of the country on the one hand, and the government of the trade unions on the other, is largely due to the restriction of the number of individuals within the country and within the trade unions. The trade unions that have this federal organization include among their members only the workers in the organized crafts.

The American Federation of Labor, which is the great central organization of labor in this country, is, however, not entirely representative of labor throughout the country. It represents rather a class of labor — the skilled trades. It has very little to do with the great mass of unskilled laborers. There is, it is true, a tendency at present to widen its scope to include laborers without a trade, but even in so doing, it desires to allot these laborers to the trades toward which they incline.

Essentially, the American Federation of Labor believes in trade unions rather than in a trades union.

The distinction is of great importance, for it emphasizes the tendency which is becoming stronger every day, to change toward an organization of labor which ignores the difference in trades. Industrial unionism, as it is called, believes in the fundamental solidarity of labor. All workmen, according to its creed, have the same difficulties to contend with, and only by combining as a whole can they achieve the solution of their difficulties. In the industrial union, or as it was known in English labor history, the trades union, the unit is a geographical one, rather than a craft unit. The large geographical units are split into smaller geographical units until we arrive at last at the fundamental unit, the shop.

There are distinct advantages claimed for this basis of organization. In the first place, the men who are at work in a single shop or plant know best the conditions which affect themselves. They know that the strike of one particular trade in the shop may bring about the idleness of all the workers in that shop. Hence it appears that an organization which includes all the workers will have a better chance to arrive at a proper decision worthy of the action of all combined, than when one group, for a reason affecting only that group, drags all into the struggle.

Again, when all the workers are united into a single union, there is better chance for a truly united action, and therefore a successful action, than when the trades are separately organized, with the unskilled workers unorganized. There will be no possibility of jealousy in regard to the trade divisions. With craft unions there is always a tendency for the division be-

tween crafts to become vague and indistinct. In the engineering trades, for example, there are pattern-makers, whose work bears a strong similarity to that of carpenters. Yet the unions are separate. In some cases, these differences which seem so slight lead to awkward complications, each union claiming that the other is encroaching upon work which rightly belongs to the claimant.

The industrial union, it is also claimed, leads to a feeling of community of interest which is of great value in the struggle between labor and capital.

The chief exponent of the industrial union in America is the association known as the Industrial Workers of the World, or, more briefly, the I. W. W. While the I. W. W. represents the "industrial" attitude, as distinguished from the "craft" idea, however, it has political and social aims which are extraneous to the present discussion.

The Shop Steward Movement—The final matter which must be dealt with under the consideration of the organization of labor is the rise of a new and very important union officer, the shop steward. The shop steward movement represents the tendency to break away from the craft union and to develop the industrial union. Even in the craft unions it has often been felt that the central control exercised by the national organization of the craft, has been too far separated from the conditions in any particular plant. Some one closely connected with the actual daily work in the plant, familiar with everything that is going on, it was thought, should represent the workers within that plant. An individual has been appointed, not rep-

representing any particular union in the plant, but rather representing all unions. His duty is to watch for attempts at increasing the hardship of the laborers, whatever their occupation, and to represent the united employees in disputes within the plant.

With the advent of the shop steward, it becomes evident that there is a tendency to break away from the central control. This tendency is seen with increasing frequency in the labor disputes that occur at the time of writing. Local unions refuse to abide by the decision of their national organization, claiming, often, that the national officials are out of touch with the actual conditions in the locality. As to the outlook for future development we shall say nothing here, but consider this matter under another head later on.

Aims of Labor Organizations — Labor organization is only a means toward an end, not an end in itself. The question now arises, what are the aims which the organized laborers seek to attain? They may be summed up in a very few words — the betterment of the laboring classes. It will be well, however, to divide these aims into four groups.

1. *Collective Bargaining* — The original cause which drove laborers to organize was the fact that the individual was powerless to bargain for good conditions of labor. As an individual he was unimportant, so long as there was an abundance of labor. In order to obtain good conditions of labor, the effect of an abundance of labor in the market must be removed. The only way to do this was to increase the size of the bargaining unit. It meant nothing to an employer if one workman asked for an increase in wages or a reduction in the hours of

work; he could always get another to do the work at the old rate. But it was a very different matter when a large body demanded a change. It was not so easy to replace, at a moment's notice, half of his workmen. Hence if the bargaining for improved conditions was done by a large group, instead of by the individual members of that group, the chances of success on the part of the laborers were materially improved. One of the fundamental aims of all organized labor, therefore, has always been that bargains for the change of conditions of labor should be made collectively. An increase in wages or a reduction in hours should affect all of the workers and not one individual. It is true that this meant, possibly, a reduction in wages for a particularly strong or particularly skilled laborer, and an increase for a comparatively inefficient workman, but on the whole it meant that a decent wage would be secured by all. The trade unions have always claimed that the rate set for payment of wages by individual bargaining has tended to be decided by what the poorest would take, rather than what each earned, so that payment on the basis of average work meant an improvement to all.

2. *Standard Wage* — We have already seen in a previous chapter that the greatest cause of poverty is low wages. After the principle of collective bargaining has been secured by the labor unions, the next step, and by far the most important, is the securing of better wages. No matter on what philosophy the demand be based, and many reasons are given for every effort at gaining greater remuneration, the fundamental fact is that each workman believes that his lot would be

improved by an increase in his wages. Wages represent to him the satisfaction of his desires. When his desires outstrip the possibility of satisfying them, he demands higher wages. This appears to be a state of affairs which can never be improved. As the wages advance so do the desires. This is not necessarily an evil. If we remember the problem with which we set out, we must recognize that the advance of civilization depends largely upon the increase in the desires of mankind, coupled with the means of satisfying those desires.

The labor unions believe that a greater share of the results of industry should belong to the workers — using the word in its limited meaning. Hence their demand that wages be increased seems perfectly reasonable. Of course labor has recognized the difference between money wages and real wages. In all modern efforts at increase of wages, a strong point is made of the increase in the cost of living. Constant studies are made of the variation in the purchasing power of money. Before the war it was estimated by the United States Bureau of Labor that \$800 was necessary to support a working-class family for a year. The latest estimate is somewhat over \$1700. If, therefore, wages have doubled, the workman has not gained, but lost slightly. Yet the unions have had to make bitter fights to keep wages rising to meet the cost of living.

The basis of the union philosophy is that the workman should not be considered as a commodity, but as a man and as a citizen. Hence his welfare is as important as that of any member of the community.

3. *Conditions of Labor* — Arising out of that philosophy, the unions have demanded that the conditions

under which a workman has to perform his daily task should be congenial. Good sanitary workshops, safety against dangerous machinery, and so forth, are all of importance. Hence the unions have striven, by collective bargaining, and by a certain amount of pressure upon legislatures, to secure improvement in these conditions. The justice of this demand has long been recognized and state after state in this country has passed factory laws which have for their aim the protection of the workmen against conditions of labor which were detrimental to their welfare, and thus demoralizing to the community.

4. *Hours of Labor*.—It is curious to note, in the history of labor organization, the gradual steps which have been taken toward securing shorter hours of labor. At first hours of labor seemed somewhat unimportant. No one thought, or seemed to think, that part of the day should be used for the purpose of leisure or amusement. Defoe paints what he considered a beautiful picture of the labor of his times — the busy housewife working at her spinning wheel, the husband weaving or tending to the work of the small farm, the children, even the very youngest, engaged in carding wool or assisting with the work in many ways. Possibly it was a relic of the puritanical objection to all amusement and idleness. At any rate the common feeling was that those who gave every minute of their waking life to work were doing what was right and proper.

Hours of labor prolonged unduly, however, were bound sooner or later to arouse objections on the part of the workers. Sixteen hours a day used to be considered as almost reasonable. Then there arose

the cry for a fourteen- and a twelve-hour day. A long and bitter struggle was waged in England to secure the ten-hour day. At present it is generally assumed that eight hours represents a fair day's work, although far too many work for much longer periods. There is an agitation going on, headed, it may be noted, not by a workman but by an employer of labor, for a reduction to six hours a day.

It has been urged against the working class that this constant demand for a reduction of the hours of labor is an indication of congenital laziness. We are all, however, more or less lazy. That only means that we do not want to be doing the same action for too long a space of time. Work in itself, as has already been pointed out, is not the aim of life. It is a means to an end and the end is the attainment of our highest development. Work which does not lead to such development is not to be encouraged. Of course a certain amount of drudgery is to be expected, but that amount should be curtailed to the greatest possible extent. Labor-saving machinery has been invented for the purpose of allowing greater production with less effort. To attempt to increase production by the use of such inventions without reducing the actual amount of work performed is to remove the blessing from the discoveries. The workman feels more and more, as time passes, that there is more to life than merely working. He demands that he be able to secure a livelihood without working all the time, so that he can use part of the day to enjoy as he pleases.

The demand made by the labor unions for the abolition of overtime is due to a twofold reason.

Partly it is urged as a cure, or at least a palliative for unemployment, but also for the reason that leisure is a rightful demand in itself. Now in both of these claims there cannot be the slightest doubt that the unions are right. A certain amount of work is good for a man, but too much is as bad as none at all. It is true that some find their recreation in work itself. These, however, are the minority. There is no value either, in the argument that the laborers would abuse their leisure.

When the demand is made for the limitation of child labor it is unanswerable. The amount of child labor which exists at the present time is a disgrace to civilization. It can at least be argued that the adult may refuse to work if he pleases (the argument is not sound), but the child cannot. To force him to work at an age when he should be playing is one of the gravest blots on our modern society.

Trade Union Methods — The trade union is, especially in this country, a fighting organization. It is based on the belief that the battle is to the strong, and it endeavors to increase its strength in order to gain the victory. The great weapon which organized labor possesses is the right to strike. A *strike* is a concerted refusal to work by a group of employees, with the purpose of securing redress of grievances. It is tacitly understood that the hiring of labor is a bargain between the employer and the employee. The employee therefore reserves to himself the right to refuse to perform his side of the bargain unless the conditions of the contract are to his liking. As we have said, when the bargain was between individual laborer and

individual employer all the strength lay on one side. In order to equate the strength of the parties, the refusal to work must be made by all, or at least a large proportion of the workers at one time.

Such trials of strength are not things to be desired. Strikes are a form of warfare, and warfare is always wasteful. The strike, however, is the last resort, the final weapon in the hands of the laborer. It is indeed true that often he has been inclined to resort to his final weapon before using milder methods. That, however, is incidental to a certain stage of development. Our forefathers used to settle their private disputes by means of duels. Nowadays we resort to legal settlements. In the early days of the mining industries and in the cattle countries, the bowie knife and the revolver settled all disputes. We have outgrown that stage now. The same is true of the war between capitalist and laborer. We have not, certainly, got rid entirely of what we may call the revolver stage of settlement, but we are getting rid of it. It is better ordered and controlled than it used to be.

In every method used by the trade union, there is a counterpart in the methods adopted by the employers. The strike of the workmen is replied to by the lockout of the employers. A *lockout* is the simultaneous discharge of all workmen or a large proportion of them, from a certain industry or a certain plant, in order to force them to agree to terms laid down by the employers. Here again, we have the other side of the revolver argument.

Now just as it was true in the early days in the cattle country that the revolver was necessary because

the law did not exist, so it is true that the strike and lockout, as a trial of strength between the parties, are necessary now because there is no law. By law, of course, we mean definite order for the securing of redress of grievances on each side.

Arbitration and Conciliation — This leads us to the consideration of some of the suggestions for settling disputes. Of these principally there are two varieties. The first is arbitration. The usual method is for each party to choose a representative on the board of arbitration and for these two, or some outside body like the Department of Labor, to nominate a third. Arbitration, however, is limited in its scope. If there has been an existing agreement between the disputants, who cannot agree upon the interpretation of this agreement, arbitration may be of some value. If, on the other hand, the question arises of making a new agreement, arbitration is unsatisfactory.

If the two parties to the dispute are so at loggerheads with each other that the settlement seems impossible without a trial of strength through a strike or lockout, then it may be possible for a disinterested outsider to endeavor to bring the two together and eliminate the principal points of disagreement and bring about a settlement of the dispute. This method, the method of conciliation, is more useful in coming to a new agreement than in interpreting an old one.

Governments have, from time to time, insisted that one or other of these last two methods should be attempted before coming to a strike or lockout. One very strong objection has been urged, on the part of the workmen, against arbitration. They argue that in

a great proportion of the cases, the board is composed, as far as its majority is concerned, of people who have an instinctive although often unconscious bias against the labor side. The lawyer or judge who is often chosen as chairman of the board is almost always drawn from the same class as the employer.

The Boycott and the Union Label — Another method of forcing employers to grant demands of laborers is the use of the boycott. This means that the unions, and as many others as the unions can persuade, refuse to purchase, use, or handle goods made by the recalcitrant employer. This is answered by the blacklist on the part of the employers. Objectionable workmen, *i.e.*, those who have been prominent in union agitations, are refused work wherever they apply.

To some extent the unions endeavor to enlist the general consuming public on their side, by urging them to purchase only such goods as are made under good conditions. The public is able to judge which are so produced by a label which is attached when the goods are made by union labor. Employers have themselves made use of this sympathetic feeling on the part of the public by advertising the fact that their manufactures bear the union label.

The Success of Trade Unionism — It is very difficult to estimate the success which has been attained by the trade unions. The estimate varies according to the standing of the estimator. There cannot be any doubt, however, that the trade unions have been of great assistance in raising the standard of life. That their methods have not been always those of the most enlightened may be granted. On the other hand it

cannot be said that a very satisfactory example has been given by their employers, who have usually, at any rate, the advantage of a better education.

Trade unionism has served to bring forcibly to the eyes of the public the fact that workers have rights as well as duties. It is unfortunate that society has not been able to learn this lesson without bitter suffering on the part of the unionists themselves, and very great inconvenience, if not actual suffering, on the part of the community.

In the foregoing discussion care has been taken to give a fair account of the aims and methods of organized labor. Many individual cases of unjustifiable methods have been overlooked. It is not suggested that in every case of a dispute the workmen have invariably been in the right. This is, of course, untrue. Nor is it suggested that in defending their own position, employers have always been oppressive. It would be quite impossible in the space which we can give to this discussion, to deal adequately with all sides of the question. There have been grievous mistakes on both sides but, taking a broad view of the development of the principle and methods of collective bargaining, and of the trade unions themselves, it is demonstrably true that they have been of immense service not only to their own members, but also to the general community in raising standards of living and thus helping to provide for a higher development of humanity.

CHAPTER XXVIII

DISTRIBUTION AND THE LABOR PROBLEM

From the remarks made in the previous chapter it should be clear that the great problem which has confronted the laboring classes, using the term in the commonly accepted meaning, has been the readjustment of the distribution of wealth. The laborers have felt that they were not getting a fair share of the wealth produced. They have not been blind to the obvious distinction between the great fortunes on the one hand and the practical poverty of great masses of the people on the other. It is not true to suggest, however, that the workmen have always had their eyes focused on these inequalities. If they had, one can hardly doubt that revolutions would have occurred before this. In order to understand the history of the labor movement a little insight into ordinary psychology is valuable. Few of us are capable of taking a broad view of life or of weighing arguments pro and con on important subjects. We all, or nearly all, consider those things which immediately and obviously affect us as of most importance. Consequently when there is discontent, the causes which are alleged to have produced this discontent are almost as many as the number of the discontented.

Petty difficulties arising in an individual plant or workshop may be the apparent cause of a totally

disproportionate dispute. We are all prone to generalize from our personal experience and to reject as irrelevant causes of evils which are suggested by those who have only a "theoretical" acquaintance with the subject. The writer once suggested to a group of workingmen, mostly trade unionists, that a thorough acquaintance with the history of the trade union movement would help to remove from the discussion of possible remedies for discontent, causes which, though they might exist, were of slight importance. One workman replied that he did not intend to read the history suggested as it "might change his opinions."

Now this is obviously an absurd standpoint, but it is not an unnatural one. Those causes of which we have immediate knowledge invariably have more influence with us than those which are the result of investigation extended into unfamiliar ground. Hence we find all sorts of wild ideas as to the causes of inequalities in the distribution of wealth. It is quite impossible in the present work to deal with all of the causes of evils in distribution which are believed by one or other group to be important. Furthermore it is impossible to do more than cite a few of the remedies proposed.

Essentially we may distinguish four criticisms with the corresponding proposals for removing the bases of these criticisms. The first is to the effect that the workers do not receive a share in the profits of industry; the second, that industry is not subject to control by the workmen; next, the tax system is claimed to be unjust; and finally, the whole foundation of our economic life, as it is at present organized, is declared

to be wrong. Of these criticisms we shall leave for future consideration the last, and the most important, and deal now with the first three.

Profit Sharing — The feeling that the workers, that is, the employees in a business should receive a share in the profits of that business or industry is one which has been advocated rather by those in control of the industry than by the workers themselves. Indeed it may be said that the schemes of profit sharing which have been proposed from time to time have been regarded very unfavorably by organized labor. This is due to the fact that, from the labor point of view, the reason for profit sharing is not the same as that which gives rise to its institution by the employer. There are, speaking broadly, three different systems of profit sharing. In the first place a definition of *profits* has to be arrived at. As a rule, a certain amount of the earnings is earmarked for the payment of interest upon capital and salaries of management. Commonly, capital is expected to receive a rate of interest somewhat larger than the average commercial rate, before profits are computed. Salaries of management are considered (and rightly so when they are not obviously excessive) as part of the cost of production. The surplus after paying for cost of production, including cost of management, labor, materials, and the stated rate of interest on capital, is divided in varying ratios between labor, management, and capital.

The first method of making the payments to labor is to give the share as a cash bonus at the end of the year. This has frequently been the first method adopted by a firm in starting the system. It is claimed, by the

employers, that this system produces steady and energetic laborers. From the employer's point of view, therefore, the aim of the institution of profit sharing is to increase the production of the laborers and to lessen the "turn-over" of labor. From the labor point of view, it is suggested that the profits which the laborer receives at the end of the year are really only wages for the increased production and therefore are due entirely to the laborers. It is assumed that capital is not increased and that the management is not materially more difficult, so that the increased production is due definitely to the increased energy of the workmen. But capital, which has done nothing more than usual, receives a share out of this increased profit and so also does the management. Hence the laborer is induced to work harder for the sake of getting at best a little more than a third of the results of his increased production. This is the basis of the labor criticism of this form of profit sharing.

The next form is that in which the dividend is not paid in a lump sum at the end of the year, but is deferred to form a sort of pension fund or life insurance. The varieties of this form are very great and so a general statement is liable to err in regard to individual cases. It is often stipulated, however, that the deferred payment ceases to belong to the worker should he leave the employ of the company. This system is also believed by those who have tried it to lead to steady work and increased production. Against it, the laborer has urged that its effect is to prevent the possibility of successful organization of laborers. The unions have regarded such systems as being subtle

forms of attacks on organized labor — “ union-breaking schemes.”

The same claims are made, on both sides, for the third form. In this form the dividend of profits is not made in cash, or is made only partly in cash, the bulk being paid in the form of stock in the company, so that the workmen become shareholders. In some cases it has been stipulated that such labor-owned shares shall not possess the voting right at the stockholders' meetings. In others the stock has not passed outright into the hands of the supposed owner, but is merely his while he remains an employee of the company.

It would seem that in all the schemes of profit sharing there is a distinct idea that increased profits would be made by the introduction of the system. It is supposed to lead to increased effort on the part of the workmen, while in a great many, though by no means all, cases, the workman is compelled to remain in the employ of the company on pain of losing his accumulated profits.

On the whole it may be said that profit sharing cannot be judged entirely by the method which is adopted. In some cases a real effort is made to give the workman a share in the returns received by the company, a share additional to the standard rate of wages which he receives as a minimum. In these cases an attempt has been made to make the connection between workman and employer a little more human, to regard the workman as a partner in the business rather than as a piece of fixed capital, easily replaced. In other cases the criticism that the profit-sharing methods are merely union-breaking schemes is fully justified. In

one English scheme, for instance, the cash which a workman received at the end of the year, as dividend upon the share of stock which was his portion of the divided profits, amounted to about a couple of dollars. The share belonged to him as long as he stayed with the company and it was given to his heirs if he died. Should he leave the employ, however, he forfeited his share. Practically, therefore, if he wished to retain his freedom to go to a different job, the actual amount received in return for his increased effort was about two dollars a year.

At best profit sharing does not answer the criticism that the wealth produced is not equitably distributed. It is a palliative of the existing distributive evils. It depends entirely upon the will of the individual employer or company both for its institution and for its method.

In the actual application of the various forms of profit sharing the success, both from the laborer's point of view and from the employer's, has varied very greatly. The majority of the attempts have been given up. Of the remainder some exist in theory only. Where a certain rate per cent is demanded as a preliminary share for capital, and the earnings barely suffice to pay this rate, obviously there can be nothing to share with the workers. The scheme may be good, but it is simply inoperative.

Judging from past experience it may be said, in summing up our discussion, that individual types in individual cases have been successful, but as a system profit sharing has failed from whatever standpoint it be regarded.

Co-operation — The second criticism of existing economic organization is that the workman has no share in the control of his work. To remedy this it has been suggested that he gain the control by the establishment of industries co-operatively owned and managed, and we have the co-operative systems offered as the antidote to the evil.

Co-operation, however, may be regarded from two standpoints. Omitting all consideration of the fact that in order to have anything like success in any organization there must be co-operation between the various members of the organization, the co-operative systems may be considered from the point of view of co-operating consumers and co-operative producers. The form in which the co-operative ideas as translated into practice have had the greatest success is that of consumers' co-operation. The idea first arose with the establishment of a little co-operative society in Rochdale, a Lancashire cotton town. The aim of the Rochdale Pioneers was to purchase all their requirements from a store owned and operated by themselves. Each of the members subscribed toward the small capital of the society, but each had one vote and one vote only in the management, altogether apart from the amount of capital invested. This principle has been maintained almost invariably with co-operative societies. The idea is that the store should be managed in the interests of all without distinction in regard to individual possessions. The organization was intended to be as democratic as possible.

Since the establishment of the Rochdale Pioneers in 1844 there have been very many imitators of the

system. In the main the methods of operation are similar, no matter in what country they have been conducted. The "members" of the society subscribe for at least one share of capital, upon which they receive a dividend limited to a certain sum. The society organizes a store and sells goods sometimes only to members, sometimes to the general public as well. The prices charged are the same, or nearly so, as those charged in the ordinary privately owned stores. The profits of the society, however, over and above the small interest on the capital, are divided among the purchasers according to the amount of their purchases. In some cases these "dividends" are restricted to the members of the society, that is, to those who hold one or more shares. In others, each purchaser, whether member or not, is entitled to receive his "dividend" at the end of the accounting period.

Experience has taught co-operators in all countries that these small co-operative stores are largely at the mercy of the wholesale dealers. The latter depend for the great bulk of their trade upon the orders received from the ordinary privately owned stores. A little organization among these stores will enable them to bring pressure to bear on the wholesalers to give them discriminating treatment. Prices to the co-operative stores are raised, and hence profits are reduced or actually disappear.

The remedy for this discriminating treatment is to establish co-operative wholesale stores. In this case the groups of co-operators in different stores combine to establish a wholesale store which will deal with them alone and directly with the manufacturers of the goods

sold. As far as the co-operators in England are concerned, and the system has made great headway there, the wholesale difficulty has been very well met by the establishment of the Co-operative Wholesale Society, which does an enormous business with co-operative stores throughout the country. In America there has not been anything like the conspicuous success in such co-operation as there has in the European countries, for reasons which will be mentioned later.

One of the great difficulties which these co-operative stores have had to solve is that of efficient management. It does not pay to assume that any one can keep a store. Yet at the beginning of the co-operative movement that was the general assumption. In the Rochdale society each of the twenty-eight members took turns in "minding the shop" and in keeping the simple accounts of the store. As the movement developed, case after case of failure was seen to be due to this amateur management, and in Europe, at any rate, co-operators have realized that management of a retail store calls for qualities and knowledge which are not common property. Hence the modern, well-organized co-operative store is managed by expert retailers. As, however, paid salesmen and managers have to be obtained, the difficulty arose as to the status of these men in the co-operative scheme. In some cases, the co-operators have not recognized their employees as being in any way partners in the organization, but have hired them in exactly the same way as a commercial corporation. In others the employees have been shareholders and therefore had a right to a vote in the management.

Co-operative consumption has not met with much

success in the United States. The reasons for this are various. In the first place co-operation, to be successful, demands a certain amount of loyalty to the society — a sinking of the individual in the common organization. This is not easy to obtain in America. The American is almost aggressively individualistic. He is accustomed to rely upon himself, and if for a while he sees that it would pay him to co-operate, it is only for a while, and very little is necessary to make him give up the organization. Again there has been very little community of action between the co-operative societies when started. There has been no state organization, much less national organization, so that co-operative societies in one part of the country could know of and appreciate the work done by others. With this lack of co-ordination in the system the individual societies have been almost entirely at the mercy of the wholesale dealers, whose largest revenue came from the privately owned establishments. Hence discrimination against co-operators became easy, and was difficult to combat.

Co-operative Production — As we have said, co-operative consumption is only one side of the matter. If co-operation is to be really successful and to become an important element in our economic organization, it must not be confined to consumption. Production, also, must be attempted. It is in the realm of co-operative production that the most dismal failures have been seen. Occasionally we see a success in this line, but, as a rule, the result is more or less qualified failure.

Capital has almost always been too small to permit of the introduction of the best methods. We have

seen in an earlier chapter that in the establishment of productive businesses (using the word *productive* in its ordinary colloquial meaning) the tendency is strongly toward the increase of the amount of fixed capital required. Usually this means a certain period of waiting before results may be obtained which may be regarded as profits. The average co-operator, especially in America, is strongly inclined to be impatient. Hence there is no chance of the industry being successful. Returns cannot be gained immediately. If the machinery is not of the best and latest models, the products are obtained at a disadvantage which means that even when profits are made, they are smaller than those of industries working under more favorable conditions. The co-operative producing organization tends to exist near the margin of operation. A little fall in the returns, and the profit line is overstepped.

Competition from the better organized factories, then, can easily force the co-operator below the profit line and then the end is not far off.

No space can be spared to give instances of co-operative management, but a word or two as to the relation between co-operation and the competitive system will be of value. Co-operation, as it has been practiced, accepts the competitive system. It fixes its prices on the same basis that they are fixed in ordinary commercial life, *i.e.*, where there is a possibility of gaining a monopoly price, that price is charged, but where the price is fixed by the more or less free interplay of the laws of supply and demand, the co-operators accept that price. Experience has taught

them that under present conditions this has been the best method to pursue. At times the experiment of selling at cost (cost to include expense of management) has been tried. Almost invariably, however, it has been seen that where it was possible to charge thus, the purchasers were not so pleased as when they paid the ordinary price and received a dividend. In most cases, however, it was impossible to charge thus. For instance, under careful calculation the cost of a pound of butter might amount to thirty-seven and one half cents. The selling price, therefore, had to be at least (on individual pounds) thirty-eight cents, or there was a loss. Exaggerate this by applying it to all the commodities stocked, and consider the difficulty of estimating the exact share of overhead expense and expense of selling of one commodity and another, and the very great difficulty of instituting a cost price becomes obvious.

Experience has also taught co-operative consumers' associations that the purchasers were very interested in dividends ("divvy-hunters" is a common expression among English co-operators) and did not object even to an increase over the ordinary commercial price, provided good dividends were paid. If attention is paid to the dividend alone, the system merely becomes one of compulsory saving, and ceases to have any of the real benefits assumed to arise out of co-operation.

As there seems to be no possibility of the co-operative system obtaining a strong hold on America, or indeed, on the European countries, it is not worth while to examine the result to be expected should the system be extended to cover all industry and to eliminate all

competition. Co-operation is not a scheme for a re-organization of the commercial system. It is a palliative of some of the evils of competition. As such it has its uses, but it is in no way to be regarded as a solution of the difficulty.

Equality of Taxation — The third criticism which is leveled at the existing distribution of wealth is to the effect that the contributions paid toward the expenses of government are not properly shared. The science of taxation is very complicated, and we are compelled by reasons of space to restrict our consideration of this subject to the smallest compass.

We assume that government must exist. There is no possibility of a great mass of people existing together unless they agree upon rules of conduct, and provide means for enforcing those rules. There are some forms of economic activity which are essential to the well-being of all, but which are not usually carried on by private individuals. Questions of police, of sanitation, of justice, of the safekeeping of the roads and of the seas are all of great importance, but no one would expect a private individual, acting under the competitive system, to erect a lighthouse at his own expense, without the privilege of collecting a toll from passing ships. Nor would we expect him to pay a judge to administer justice, unless, indeed, he expected that judge to see the law from the point of view of the interest of his employer. Without, at present, going into the functions of government, it is sufficient to assume its necessity. The question then arises of the payment of the expenses of government. Under what basis should they be distributed?

Should landowners only be taxed, and if so, how much? Should corporations pay a share, and if so, should it be based upon their capitalization or upon their profits? Should the incomes of all be used as a basis of taxation? These and many other questions must be solved. We cannot go into all of these questions, but some of the principles which underlie their solution can be discussed.

In the first place we must distinguish two points of view. The secretary of the treasury or chancellor of the exchequer, or whatever name may be given to the individual responsible for the proposal of taxation, has one distinct point of view. He must decide how he can get the largest amount of tax revenue and how he can obtain this with the least opposition. The taxpayer, on the other hand, is interested in having his own individual share reduced as low as possible, or at least, if he is a little more altruistic than the ordinary person, he wants the taxes to be distributed so that the burden falls upon the back best able to bear it.

It is generally assumed, nowadays, that the burden should be placed where it can most easily be borne, rather than equally. Equality of sacrifice is sought, rather than equality of amount in taxation. This is extremely important in deciding on the imposition of direct taxes, such as, for instance, the income tax. Suppose a straight tax of five per cent were made upon all incomes. From the arithmetical point of view that would be a fair method. But it is not so from the more human point of view, which takes into account the sacrifice involved. Five per cent of a wage amounting to \$1000 per annum means a payment of \$50. Five

per cent of a salary of \$50,000 per annum is \$2500. The sacrifice of \$2500 by the man with the large income is hardly felt. One cannot think that he will give up anything of importance through the diminution of his income. On the other hand the man who pays 50 dollars out of an income of 1000 dollars feels very keenly the loss of the money. His sacrifice is very much greater than that of the wealthier man.

The same thing is true of taxes levied not directly, but on commodities. The man whose income is only sufficient to supply him with the bare requisites of life is bound to feel very severely anything which tends to increase the cost of those requisites, while the wealthier man feels them very slightly if at all.

It is sometimes argued, too, that taxes are the payment made for a definite service rendered by government—services like the securing of liberty, the prevention of theft, the provision of sanitary cities, the care of the sick in public hospitals, the protection of the country against enemies. As all are supposed to be equally benefited by these services, the payment from each should be equal. Against this, however, it is urged that the services are not the same to each. To the poor, whose property is nothing, the protection against theft is of slight importance, while it is of great importance to the man of property. Hence as the service is greater to the latter, he should pay more.

Again, some of the services are distinctly personal. For example, the machinery which safeguards patent rights for inventors affects only the inventors. They should be required to pay for those services much as the

person who rides in a municipal street car is made to pay for the service rendered.

In actual practice a compromise is effected by the tax makers. In some cases a specific charge is made for the services rendered by the state. This class of tax is usually referred to as a fee, and comes under the same category as a fee charged by a doctor or lawyer. In others, the tax is laid directly upon the commodity, like the tax on tobacco, for example. In this case each pays in proportion to the amount of the commodity he uses.

As a matter of reform in the distribution of wealth, it is doubtful whether improvement in tax methods can be of any great service. It is, of course, true that a great deal of injustice can be effected by changes in the method of obtaining government revenue, but their proportional effect upon distribution can be very much overestimated. In exceptional times, of course, there is opportunity for the government to obtain a greater share from certain individuals than in normal times. In the case of war time, for example, we have an unusual situation where men in certain businesses have reaped very great profits through the sudden increase in demand for the commodities they manufacture. Steel manufacturers, munitions makers, clothing contractors, and each of the thousand and one different trades which are affected by war requirements, have been able to make enormous profits. As these profits are directly a charge on the general community, a charge due to the fact that the manufacturers concerned have taken direct advantage of the government's needs to increase their prices, the government is

certainly entitled to take, if not all the additional profit above normal rates, at any rate the greater proportion. Hence we see the institution of the excess profits tax, which levies toll upon these abnormal profits. Heavy as has been the taxation on this basis, it cannot be said to have been too heavy and no one has worried much about the opposition of certain interests to the imposition or increase of such taxation.

Under the present system of economic organization, where distribution is obviously unequal and inequitable, there can be no doubt that the basis of equality of sacrifice is the best upon which to work in securing the funds necessary for the support of government. Equality of sacrifice in taxation necessitates what may be called progressive taxation. Taxation is proportional when the rate levied varies arithmetically with the amount to be taxed. That is, when the same percentage is charged no matter how high the amount be, the taxation is proportional. But we have already seen that merely proportional taxation is not satisfactory in securing equality of sacrifice. Hence in direct taxation, particularly in regard to income taxes, the best method is to increase the percentage paid as the amount of income increases. It is impossible to estimate mathematically how the taxation should be graded, for each man's income has special considerations which require to be regarded. Some men gain great incomes by their own exertions — successful lawyers, doctors, actors, manufacturers, for instance. Others sit still and do nothing but draw dividends. In the latter case, seeing that no duties are performed by the individuals in question, it is right that they be called

upon to pay pretty heavily for their support in idleness. In regard to the others, they are at least supplying some demand directly, and in so far they are deserving of encouragement by the community. This leads us to the distinction between earned and unearned incomes, the latter being taxed at a heavier rate.

As has been said, however, the distribution of wealth will hardly be materially affected by reforms of taxation while the taxation is levied with the pure aim of securing sufficient and only sufficient revenue to run the government of the country. A much more important suggestion is a revolution of the ideas as to the economic functions of government. As a great many of the schemes of economic reorganization are based upon such a fundamental revision of our ideas on these functions, it will be well to leave their consideration to the next chapter.

CHAPTER XXIX

THE ECONOMIC FUNCTIONS OF GOVERNMENT

Most of the theories upon which are based the programs for redistribution of wealth have their origin in the belief that the economic system under which we live at present is wrongly founded. The suggestions which have been discussed in the previous chapter are considered as mere tinkering with the organization, when what is required is a thorough rebuilding upon a new foundation.

In nearly every case the suggestions for the new foundation of economic society include a very considerable increase in the economic functions of government. It will be well, therefore, before we can deal properly with the schemes of social and economic reconstruction which are of such enormous importance at the present time, to analyze carefully the economic functions of government as they now exist. We may divide them into three classes, the protective functions, the regulative functions, and the operative functions.

Protective Functions — Even the strongest believer in the theory of *laissez faire* will be quite willing to admit that government has certain duties to perform which are of an economic nature. Free competition, which is essential to the *laissez faire* system, cannot

exist unless the law of contract is made effective. All our trade depends to a large extent upon the fact that individuals on the whole are ready to fulfill their obligations when and as they arise, but some compulsion must be exerted upon those who refuse to live up to these obligations. The law must step in to protect the individual against those who receive the benefit of one part of the contract and refuse to perform the *per contra*.

Again it is recognized that some parties to contracts are not in a position to protect themselves against exploitation by others. This is particularly the case in labor contracts. Children are certainly not able to secure just treatment themselves. If their parents force them to work before they are really strong enough to earn their own living, there is nothing, except government action, which can prevent their exploitation successfully. Child labor laws are essential to any well-ordered state. But child labor laws only represent the beginning of the government's protective work in regard to labor. Women's labor must also be protected, and indeed men's labor as well. There was a time when it was common to work for sixteen or more hours per day. This is not the case now. Government has stepped in, time after time, to restrict the hours of labor. Government has also interfered, and wisely so, in the manner in which workshops and factories are conducted. Sanitary laws have been passed, as also have laws against the use of unfenced machinery, unsafe scaffoldings, and so forth.

The general security of the country against foreign invasion is part of the function of government. This

is comparable, although it is on a larger scale, with the police protection afforded the individual in our cities.

Our ocean trade and coast trade are protected by proper mapping of the harbors and sea passages. Lighthouses are maintained at government expense. It is obviously impossible to expect that private interest will erect and maintain lighthouses, yet they are necessary to safe trading.

Regulative Functions — The history of government economic activity since the industrial revolution is full of examples of increase in the regulative functions of government. It was pointed out in an earlier chapter that a distinct change has taken place in the nature of government regulation, however, and it is worth while now to consider the change in some detail. The theories of economic organization to which the name of *laissez faire* has been attached, were very largely due to a reaction against the old-fashioned method of government regulation of trade and industry. Such regulation, consisting as it did in laying down rules for the conduct of industry, rules which were to guide the manufacturers in the methods to be used in industry and the products to be manufactured, was felt to be interference rather than regulation. With the advent of the new machine production the irritating interferences of government were bitterly resented.

As is quite often the case, it was not seen at the time that a change in the nature of government regulation of industry was required. The manufacturers demanded the entire and complete abolition of all regulation. Industry was best when it was left most alone; govern-

ment which did the least governing was the best form — these were the cries.

Experience soon taught, however, that government could not let industry alone. That selfishness which was supposed to be the foundation of successful economic organization showed, in practice, that it had lost little of its ancient evil. While it did secure a wonderful addition to the total wealth of the country, it succeeded also in changing the relative distribution to an enormous extent. The strong prospered and the weak were driven to the wall. Modern feelings of humanity prevent us from considering that the weak are better killed off. We realize, and should realize even more strongly than we do, that if the weak were driven off and society consisted only of the strong, the loss would be to society. This is especially so when we consider economic strength. The ability to make money is not the only ability of which society stands in need. This is obvious if one considers for a moment what life would be like if every one of us devoted his or her attention solely to the purpose of gaining as much wealth as possible. Our music would degenerate into rag-time, our artists into poster painters, and our actors into "movie artists." We are not decrying any of these forms of self-expression, of course, but it must be admitted that much of the best of life would be lost if money were the only consideration.

In order to prevent a crude conception of economic organization from ruining the world, government had to step in to regulate the working of the system. It has been shown in the previous pages that the tendency of economic development is towards the elimination of

competition. But while that tendency exists to a very strong degree there exists at the same time a strong tendency for the control of the larger units which have superseded the small competitive units, to pass into the hands of a comparative few whose main idea is not the service of the public, but the gaining of profit.

Large-scale production undoubtedly secures economy of effort in production, but that economy is of no real benefit to society unless society as a whole shares in the profits. The dangers of powerful monopolies, controlled by individuals whose concern is merely profit making, are obvious and there is no need to labor the point. Government must step in to see that the monopolies or quasi-monopolies are so conducted that benefit and not loss results to society.

It is for this reason that we have our railroad commissions and interstate commerce commissions — our anti-trust laws and bank acts. A point is reached, however, when there is little real distinction between control and ownership, except in operation. If the trusts are so controlled that they cannot manipulate prices to suit themselves, much of their value to those who have organized them is lost. The public, however, is benefited by the economies of production, provided, of course, that the trusts have been organized on a sound productive basis. But if the government does so control the trusts, and profits to the owners sink to the level of commercial interest, the trust owners become practically shareholders in a government organization.

Again, in the case of railroad regulation and control, the control may be exercised so stringently that the

railroad owners are also in the position of government bondholders.

The difficulty has been to decide where to stop. It is not our intention to give details of control as exercised by our government. It must be pointed out, however, that there are certain industries which are of the nature of monopolies. They cannot be successfully operated unless they are worked on a very large scale. These are the so-called "public utilities." Every one recognizes that competing telephone systems are undesirable. The telephone system in a city should be a unit, not two or three units. The same is true of street car service. To a less extent, perhaps, the same is also true of railroads. Two railroads, separately conducted and organized and following the same routes, are uneconomical. For this reason, these public utilities, whether owned by the public, *i.e.*, the government, or privately owned, must be permitted to work as monopolies.

They must be closely controlled, however, in order to protect the right of the public as against the rights of the individuals who own the stock in the monopoly. At present, the extent of the regulation depends greatly upon questions of practical statesmanship. This matter will be further considered later.

Operative Functions — The student will have realized that the regulative functions of government, carried to extremes, tend to overlap into the operative. There are, however, some operative functions which the governments all over the world, practically, retain in their own hands. The outstanding instance is, of course, the carriage of mails. The post office is an institution which few, even of the most rabid,

individualists would like to see again in private hands. We seldom realize to what a tremendous extent civilization depends upon the free and cheap carriage of mails. A little consideration, however, will serve to show the extreme importance of this function. If any industry must be carried on as a monopoly in order to serve its purpose well, it is this.

The supply of transportation, however, is almost as important. Hence it is in this instance that we find the next most common of the operative functions. It is true that the national government is not so usually concerned as the municipal. But the fact that transportation within the confines of a city tends more and more to become the care of the civic authorities does not take away from the governmental nature of the operation. There are few cases, moreover, where the cities which have once undertaken the management of their own transportation systems have relinquished that management into the hands of private corporations.

The same is true of the supply of water and of light and heat. The question then arises, how far is the governmental function of operating industries either in competition with or in supersession to private operation, to be extended. There are some cities that run their own electric car systems, but do not supply their own water. Others supply their own water but not transportation. Some own their telephone systems, but not their gas and electricity. In some countries the government owns the railways entirely; others have both government and privately owned railway systems; while in still others the railway systems are privately owned and operated.

Government or Private Ownership of Public Utilities—The question as to whether public utilities should be owned by the public themselves or by private interests is one which cannot be given a general answer; so much depends upon the individual instance. It is important to remember, however, that government itself consists only in the relegation to certain individuals of a certain amount of control over others. These individuals frequently abuse the power placed in their hands. Frequently they make grave mistakes. To take hypothetical instances, we may say quite definitely that where the government consists of individuals who are not trusted by the governed, or where they are notoriously inefficient, there is no question but that public utilities should remain in the hands of private enterprisers. Where, on the other hand, the government has proved itself both honest and capable, a strong case is made out for the operation of public utilities by the governmental organization.

It is well to remember, too, that because government has failed in a particular case to give a good account of its operations that is no argument against the general case for government ownership and operation of public utilities. In a recent work it was argued that because a certain government had failed miserably in working a telephone system, dishonesty and inefficiency being evident in all its workings, therefore the case for government ownership of telephones was entirely lost. As a matter of fact, however, that same government had shown itself utterly incapable of administering justice with the least degree of equity. If the former

argument held good, then it was just as conclusively proved that law and order should be in private hands.

Private enterprise has advantages that it would be absurd to underestimate. With profit as the great aim of life, a vast multitude of different satisfactions have been produced. The fullest development of the individual activity, self-seeking, has made possible the sustenance of a great population. Countries which formerly supported with difficulty a population of a few millions now support with comparative ease many times that number. During the past hundred years inventions of labor-saving machinery have been million-fold; so also have inventions to satisfy our æsthetic senses. Men have expended every last ounce of energy they have possessed in the service of their fellows. It is not true, however, that they have always realized this service and have taken it for their aim. The service has been incidental; but it nevertheless existed, and that much must be granted to the individualistic system of private enterprise.

Lessons of the War — A system is not properly tested in normal times, however. It must stand the strain of a crisis before we can say that it is really successful. At the present time, we are in the midst of one of the greatest crises in the history of the world. The great war is practically ended, and we cannot afford to be blind to the lessons which it has taught us. It is not within the scope of our study to inquire into the moral aspects of war or into the political causes and results. War, however, is very largely an economic problem, especially when it is on a large scale. The colossal scale upon which the great war has been waged has

put an enormous strain upon our economic organization. In the first place it has meant the withdrawal from productive labor of a very large section of the population of the belligerent countries. Probably over thirty-five million men have been engaged in actual fighting. Add to these the great number who have been more or less intimately connected with purely war production and we enormously increase the total number of those whose labors are non-productive for ordinary purposes.

Meanwhile, of course, the remainder of the population must produce all the necessities of life, not only for themselves but for those who are withdrawn from ordinary production. Normally we may assume that, on the average, each produces enough for his support and for the support of his dependents. Now a much smaller number must labor to supply all the needs. But production cannot be maintained at a constant level during war time. If the war is to be successfully waged, production must be increased because of the enormous waste of material, a waste which is infinitely greater than that of ordinary life.

Such a situation places a tremendous strain upon the economic organism. If it has been inefficient before, but the inefficiency has not been very evident, it will appear at once with the new strain. At the outbreak of the war it was quite obvious that without great changes the economic structure must break down. The first indications lay in the financial world. We have already noted that finance is peculiarly sensitive to economic disturbances. The methods of financing international trade are complicated and require a

very considerable amount of trust in the fulfillment of promises. Now in war time some of these international contracts simply cannot be fulfilled. Ships are required for the transport of men. When the enemy resorts to indiscriminate destruction of merchant ships the loss of transport facilities is very much greater. Without government assistance the whole structure of our international payment system would have broken down. Acceptances could not be met at maturity. Exchanges were subject to rapid fluctuations much wider than in ordinary times. Organized co-operation was essential unless an epidemic of bankruptcies was to ensue. Hence almost at the very outbreak of the war, we find government after government taking steps to prevent these bankruptcies. It is impossible within the limits of the present book to enter into details as to the methods adopted in one country or another. The principle which we wish to emphasize, however, is clear. Private enterprise, relying very largely upon the competitive system, succeeds fairly well in normal times, but in a crisis, all must realize the intimate interdependence of society, and organized co-operation must be substituted for the working of a *laissez faire* system.

It is not in the financial realm, however, that the most important effects of war upon economic structure are seen. It is in the realm of production. The whole basis of production is changed. Under a system of private enterprise, the motive for production is not the rendering of services. The services must be rendered, of course, but this is incidental. The real motive is the gaining of profit to the person who performs the

service. Now the highest profit, as we have seen, does not necessarily mean efficient production so as to secure the greatest amount with the least effort. With a diminished working population and an enormously increased demand, profit, from the social point of view, ceases to count. What is required is a vast increase in production utilizing every known means of economizing effort. The nation could not afford to let private individuals take the opportunity of profiting by the peculiar circumstances which caused the great increase in demand for goods and services.

Let us take one of the principal illustrations of the failure of uncontrolled private enterprise. Our railroad system, or rather our railroad systems, have on the whole shown a wonderful power of organization, but they have nevertheless allowed a very great amount of waste effort. Competitive lines running between the same terminals have meant uneconomic terminal facilities, unequal distribution of freights, and where the two lines were more than sufficient for the traffic to be borne, half empty trains and idle freight cars have resulted. Cars have often passed one another, going in opposite directions, with similar goods. All this is pure waste and is incidental to a system of private enterprise. This waste, however, could not be suffered under the crisis. Hence some co-ordinating effort had to be made to eliminate it. Practically, the only way was that which was actually adopted. The government took entire control of the railways. Every available car was used, and all cross-shipments prevented as far as possible. If the government, however, had merely assumed control of the railways, without

at the same time controlling production, much of the possible economy would have been missed. Possibly the best way in which the whole operation of government control and organization can be seen is to take as an illustration the building of a merchant fleet under government contract.

Illustration of Government Economic Activity during the War — At the outbreak of the war the American merchant marine was almost a negligible quantity. The British owned far more ships than any other country, and while a good deal of British shipping was used to transport foodstuffs and munitions of war from the United States, this shipping was in great demand for purely British purposes. More ships were absolutely necessary to carry on the normal trade, let alone the abnormal demands of the war period. The facilities for building ships in this country, while sufficient for previous needs, were entirely inadequate for the construction of enough vessels to satisfy the new demands.

The United States government, therefore, decided to build its own ships. It financed the existing ship-building companies so that they could extend their yards. It provided much of the funds necessary to build new yards. Contract after contract was let for the construction of ships, the total amount involved being several hundred million dollars. Not only did the government let the contracts; it undertook to provide the steel necessary and the wood also, where the ships were built of wood. All orders for material of any nature required in the construction of the ships — boilers, machinery, anchors, chains, cable,

steel — were centralized. And it was here that the control of the railways played such an important part. The steel and other materials were sent from the nearest manufacturing point to the place where they were needed. The orders were so placed that as far as possible each ship-builder had sufficient material for his immediate needs, without laying in a great stock. Thus no ships were provided with machinery long before the machinery could be installed in the vessel, while others lacked machinery and were delayed in construction. As far as was possible in such a rapidly constructed organization, every available means was adopted to secure the whole of the ship construction program working as one unit.

This system would have been quite impossible without the government organization. It would have been extremely difficult for the individual concerns to have organized themselves on such a basis that each of them received all that it required and as it was required. Under private enterprise each would have sought to fill his requirement for as long a future period as possible, regardless of the fact that others might have to delay construction of ships until necessary material could be obtained.

The contractors were left very largely to themselves in the matter of construction, although government inspection of every part of the ships was secured. That there was a considerable amount of waste and some duplication of effort is undoubtedly true. This, however, was inevitable under the circumstances. The object was to produce ships as quickly as possible and regardless of the cost. No one can deny that this

object was fully achieved. It was only possible to achieve it, however, under government organization.

Now let us summarize the difference between the old private system and the new government organization. Under the old system we had fairly efficient single organizations competing with one another, but no co-ordination of general effort. Under the new, while there was no doubt a considerable amount of inefficient work, there was distinct co-ordination of general effort. Waste there was, too, but the waste was due rather to the extreme haste with which all construction had to be carried on. But waste existed also under the older system. In fact it would be safe to say that there was greater waste in the competitive method than in the new co-operative method. To counterbalance the waste there was a great economy of productive effort. This was bound to be the case when the aim of production was changed from the mere securing of profit to the increasing of the amount produced. In short, left to itself the private enterprise could not have produced the American Merchant Marine which has been developed in the brief space of one and a half years by the United States Shipping Board.

It is not only in the line of production, however, that government had to take on new duties. Scarcity of foodstuffs and materials generally made it necessary to ration these to consumers. We all know how the government restricted the individual use of sugar, wheat, and other foods. We know also that the makers of clothing materials were restricted in the amount of wool that they could use. It is not so well known, however, that in other countries (in England,

for example) practically every manufacture was supervised to the extent that the raw material was rationed out among the manufacturers. Instead of competing with one another for the use of the raw materials, each received a share according to his capacity to use it. American wheat was practically rationed out to the European countries who were too occupied with actual fighting to produce their necessary food. It is, indeed, probable that for a long time such regulation of food importations will have to be maintained.

At the present moment we are not concerned with the question whether this government rationing is the right method or not. All that we are trying to show is that in a time of national crisis, the system of private enterprise must give place to government control and in many cases government operation also.

One lesson we have learned from the experiments conducted during the war — a lesson which will have extremely important influences upon the economic organization of the future. In spite of the efficiency which has characterized industry all over the world, and American industry in particular, production has been only a fraction of what is possible. A hastily organized and in many respects incomplete government-operated system has more than doubled the total production in this country. With intelligent co-operation between the great producers, a vast increase in total production can be achieved, even with our existing knowledge of productive methods.

There is great hope for a better economic system in this new knowledge. All that is wanted to make good use of it is the will and the exercise of the best

brains of the country on the problem of satisfying desires instead of reaping fortunes.

Our war experience sheds a great light on some of the theories which have been advanced from time to time by reformers and even by dreamers, and we shall turn, in our final chapter, to a consideration of some of the most important theories of social and economic reconstruction.

CHAPTER XXX

PROPOSALS FOR SOCIAL RECONSTRUCTION

Economic Organization a Steady Growth — From time to time in the preceding chapters we have tried to show that our social and economic organization is the result of a gradual growth. We do not progress by leaps and bounds, although at times it appears that a great step forward has been taken. Insensibly changes are taking place and realization of the changes only develops when they have become obvious through the difference between present and fairly distant times. No sudden great change has much chance of being permanent. The instinct of conservatism which is strong in us all tends to prevent the success of any absolutely radical change. Those steps in progress which have appeared to be of great importance can usually be traced by the historian to a long line of small developments all preparing the way for the change.

Society Dynamic, not Static — In spite of this, from time immemorial men have tried to imagine or construct new schemes of society which would be an improvement on the existing system. From Plato to H. G. Wells we have had our Utopians. There is, however, a noticeable difference between the Utopias constructed in the past and those which are suggested in our present generation, for we have not lost the

desire for the perfect life. The older schemes of state reconstruction were static. That is, they were schemes for a perfect, completed organization which was to be the last word in organization. Perfection, however, is the very negation of life. When a thing is perfect there is nothing further to strive for. In our very best efforts there is always a little short of absolute perfection. We see this in every phase of life — in art, in science, in literature, in music. No matter how great the artist, writer, or composer, there will always be the critic to point out his shortcomings. Our modern Utopians realize the fact that the perfect society is always ahead of us and can never be present; they know that a society which has no goal toward which it strives is dying. Hence we have, instead of the older static schemes of a realized perfection, the dynamic state — a living system which has all the elements of growth. That the suggestions are attempts at picturing perfection cannot be denied, but there is always the realization that in practice difficulties would arise — difficulties to be overcome by careful thought and a re-solving of problems.

All Utopias, however, have as their basis a feeling that the existing state is unsatisfactory. Hence the very schemes that are propounded as a cure for these evils constitute in the first place a criticism.

Failure of Communistic Experiments — The inventor and discoverer is always impatient at the slowness of his fellows; so impatient, in fact, that in schemes of social reconstruction in particular, he is anxious to try experiments. It may be said at the outset that all the schemes that have been tried have proved to be

failures ; but this fact does not detract from the possibility of the ideas being of great value in a growing social organization. Communism has been attempted at various times and in various places, occasionally with temporary success and ultimate failure, sometimes with failure from the start. This does not, however, prove that communism is an absolute failure as a solution of the social problem. We have seen, in the course of our study, that all history proves the growing interdependence of human beings. The economic unit has steadily grown until, as far as civilized countries are concerned, it covers the whole world. No group can separate itself permanently from the great social organism and hope to have a real effect upon that organism. Even if successful for a time, its very isolation tends to bring about its own ultimate destruction.

The idea that man would be better off if he shared everything with his neighbors finds support from a great number of people who are dissatisfied with the existing scheme of distribution. Private property has been declared to be at the root of all the evils of which they complain. Hence the solution of the problem lay, to their minds, in the abolition of private property. The supporters of communism, however, are comparatively few at present, and the greater part of the schemers for a better system pin their faith to one form or other of what is called *socialism*.

Socialism — It has been frequently necessary to remark that words are used colloquially in many different senses, and for the purpose of scientific discussion it is necessary to give a sharp definition to

each term used. Terms which are common in political thought are probably more subject to varying interpretations than any others. Take the common terms, *Democrat* and *Republican*, in our American politics. Is it possible to define accurately the meaning of these terms, apart from the incomplete definition contained in the suggestion that they refer respectively to members of the Democratic and Republican parties? Just as it is impossible to give a definition of these two political names, so also is it impossible to define socialism in a manner which will satisfy all socialists.

Moreover, the ideas of the meaning of *socialism* held by those who do not claim to be socialists are at infinite variance from the meaning attached to the term by its professors. How, then, are we to discuss socialism with any degree of satisfaction?

Though the variants of socialism are very numerous, there is a certain idea running through all the forms which is essentially the same in each. We shall, therefore, before discussing one or two of the principal forms, consider the main idea which pervades them all.

Socialist Criticisms — Like all other more or less Utopian schemes, socialism commences with a criticism of the existing system. The nature of the criticism necessarily points out the methods by which the evils are sought to be abolished. Social organization has its only justification in the satisfaction of the needs of the individuals who compose society. Just in so far as the organization succeeds in meeting the requirements of its members, is it successful. What are the essential needs of the members of society, *i.e.*, humanity

at large? They consist of three groups. In the first place the physical needs must be satisfied. These are the provision of food, clothing, and shelter. Any organization which does not make provision for these primary needs is an obvious failure. How, then, does our present system succeed in this respect? All who are actually alive serve to prove that there is at least a measure of success. The socialist, however, claims that the measure is so small that it is hardly worth considering. He points out the vast inequalities in distribution of food, clothing, and shelter; the coarse, impure, and insufficient food of the poor; the overabundant and ridiculously elaborate meals of the rich. He contrasts the rags which clothe the poorest, the inartistically designed and poorly constructed clothes of the lower classes, with the garments of the wealthy classes, especially the marvelous creations which adorn the wives and daughters of the wealthy. The hovels in which many thousands of the poor are housed and the badly designed and still worse constructed dwellings of the average workman and even the houses of the middle class bear no comparison with the dwellings of the millionaire.

A system which allows of such inequalities cannot be said in any way to be successful. The criticism does not imply, of course, that there should not exist the expensive and highly artistic dwellings; on the contrary, the socialist, as a rule, desires that the number of these should be even greater than at present. He does say, however, that where these wealthy homes are only possible because of the existence of the average outrage on architecture and workmanship in which

the bulk of the population is housed, the system is an ugly failure.

In the second place, society must provide for the conventional necessities. Man does not live by bread alone. He is not content, and he should not be content, with the bare means of subsistence or even with abundance of coarse but satisfying food, warm but uncomfortable and inartistic clothing, efficient but inconvenient and ugly shelter. He desires, and he ought to desire, variety of food, satisfactory in quantity and as nearly perfect in quality as is possible. The same is true of his clothing and his housing.

There is more to life, however, than the mere physical fact of living. The progress of civilization is the growth of the desires of man. The savage is content almost with the bare physical necessities, but the higher in the scale of civilization, the greater are the number and variety of the desires of the individual. Music and leisure to enjoy and practice it; art and the knowledge to pursue and appreciate it; the joy of wresting the secrets from nature and advancing scientific knowledge — all these and more form part of the real necessities of life. Luxury exists to-day and is often senseless; it is the expression rather of the power of spending than of the desire to enjoy to the full the blessings of life. It tends not to the increase of man's desires, but rather to the decrease of the general satisfactions in order to satisfy the more or less inane wants of the idle rich.

The socialist does not contend that all luxury should be abolished. But he does insist that luxury, especially the type which is common to-day, has no right to

existence while there are vast masses of the people who are reduced almost to the bare level of subsistence. He does not share the idea that the refinements of ease and of leisure are of themselves immoral; rather the opposite. He insists on the right of all to gain the greatest amount of enjoyment and pleasure out of life.

In these two aspects of the socialist criticism of life as it is lived at present, the essential point of the criticism is that the method of distributing the products of our economic energy is fundamentally wrong. There are some, of course, who suggest that wealth as it is produced should be shared by all equally, but this is not necessarily a fundamental principle of socialism. Many who call themselves socialists do not desire the absolute equality of income for all, but recognize the value of a certain amount of diversity of income. None, however, will admit that the great inequalities which exist to-day are necessary, still less advisable.

The severest criticisms, however, lie in the realm of production rather than in distribution. It might conceivably be possible to arrange a new method of distribution without absolutely reorganizing the basis of modern economic life. But the socialists declare that the method of production — the competitive method — which rules our economic system, is fundamentally unsound. Its basis is the belief that scientific selfishness produces the best and most abundant production. We have seen in our account of the competitive system, that the real aim of the producing individuals was not the rendering of service to the community and exacting a reward for such service. The aim was to secure the

reward — the service was incidental. The farmer cultivates the ground for the sake of the price he receives for his product, not for the sake of providing food for the people. The shipbuilder builds his vessels in order that he may gain as large a sum as possible from the man who is to use the ships, not in order to facilitate the interchange of commodities and so increase the welfare of the nations. Incidentally the people are fed and the goods are interchanged. But these services are performed in a very inefficient manner. Effort is not economized, but rather wasted, and wasted on a colossal scale. Instances abound. Take the case of the retailing of groceries, for example. In any city we can see the great multiplication of little stores, each with its variety of goods for sale. In none is there a complete stock, and customers go from one store to another, buying a little here and a little there. Inefficient buying on the part of the dealer results in goods lying on the shelf in one store while there is a shortage in others. In the case of perishable goods, the waste is still worse. Goods are actually left to spoil because they happen to have been bought too freely by one storekeeper, and his customers do not absorb them. The bigger stores have realized this waste and have to a large extent eliminated it in their own organizations. Even in the case of the large chain stores, however, there is waste due to competition with independent stores.

Take production on a larger scale, like the manufacture of steel goods. At times we have the bulk of the factories working at full speed, but it is commoner for each to be working at less than full speed — some of the machinery idle all the time. This, declares the

socialist, means the waste of effort caused by producing more machinery than is necessary. Again little manufacturers still exist competing for the odds and ends of trade with inefficient and more or less obsolete equipment, taking toll of the muscles and minds of those who work it, when the muscular and mental effort might be saved by using the more modern tools and machines.

The competitive method, moreover, introduces one type of worker whose energies are almost entirely waste. The advertiser is absolutely necessary to business as it is conducted to-day. Look at our advertisements of motors. Each manufacturer is striving to tell how good his own machine is in as seductive a manner as possible. It cannot be true that all are equally good, but it is perfectly possible that there is little to choose between a score or so of the best. At a given price there is probably little real variation in quality. Yet the cost of the advertisements accounts for a very considerable proportion of the selling price. It accounts, also, for a very great amount of what, to the socialist, is waste of individual effort on the part of advertisement writers, artists, draftsmen, printers, and so forth.

The keynote of the socialist criticism of the existing system of economic production is to be found in the word *waste* — waste of effort, of time, and of material.

With a great deal of this criticism we must needs agree. No sane man will refuse to admit that distribution of wealth is absurdly inequitable at present. Even the wealthiest admit it and often try to minimize the evils of the distribution by a voluntary offering of

part of their wealth to those less fortunate. It will also be readily granted that the workman (using the term in its broadest sense) is entitled to a greater return for his efforts than he actually obtains.

It is not so freely granted, however, that the leisure of the hardest workers at present should be increased. We have still too much of the Puritan feeling that pleasure is evil and that idleness is productive of all sorts of mischief. Yet a little thought will be sufficient to show that work, except in comparatively small quantities, is not of itself a blessing. It is a means to an end and there is far too great a tendency to regard the means as the end itself. No man can be a good citizen whose mind, at its freshest, is used on his work alone, and who gives the more or less exhausted brain power to the real business of being happy and assisting others to be so. We smile at the eccentricities of the artist and the inventor, but there is just a little envy in our smile.

A socialist street orator put the whole situation very aptly, if his language does seem confused, when he said that "what we want is more work and less of it." What he meant was, that we should work rationally, not wearing ourselves out with toil for a few weeks or months, and then lying idle for a similar or longer period. Our periods of working should be of shorter duration, but they should be steadier. From the point of view of economic working, there cannot be any denial of this belief. Experience has proved time and time again, that long periods of work produce poor workmanship. It is not a mere chance that the bulk of the accidents which occur in industry take place toward

the end of the working day. Long periods of unemployment, also, tend to produce the unemployable. We are very largely creatures of habit, and when we get in the habit of doing a certain amount of work each day, we do not feel the same desire for idleness as when we alternate periods of great effort with periods of complete idleness. To put the matter briefly, experience proves that the average human being requires both work and idleness, and it is false economy to allot the idleness to one group of individuals and the work to another. That sort of "division of labor" is one of the few varieties which do not conduce to economic efficiency.

Turn now to the question of waste in the competitive organization. The whole trend of development, as we have attempted to show in the preceding chapters, is towards the elimination of the very competition which is still sometimes spoken of as the "life of trade." The strongest arguments in favor of big business and unified control are those based on the economies resultant from the removal of competition. Perhaps the average individual, especially in America, will not admit the importance which the socialist places upon this economic waste. In the case of advertising, for instance, there are advertising associations all over the country whose members will always be ready to justify their occupation upon sound economic grounds, and it is worth while for a moment to consider some of these grounds. It is asserted that nothing can be sold to people unless they know about it. Indeed, some people cannot be made to appreciate a good article unless its goodness is

drilled into them by constant repetition. Does the advertiser, however, really base the justification of his business upon this belief? Admitting its truth, as we are forced to do, does this justify the advertising that occupies so large a space in our magazines and newspapers? Most advertising experts will agree that, while advertising will help to sell for a certain time a commodity which does not nearly live up to the advertised recommendations, unless the commodity has a real value or rather unless it satisfies a real desire, advertising will not secure permanent sales. Still, there are few commodities which are as good as the advertisements declare, and a well-advertised article will sell more rapidly than a better one which is not so widely known. There is a strong tendency nowadays for advertisements to be more accurate in their descriptions of the advertised goods than was formerly the case, but the best that can be said is that a certain amount of advertisement is an absolute necessity. The degree to which this method of attracting attention to goods is carried at the present day is, however, far greater than can possibly be justified. If we cannot admit the full strength of the socialist's argument, at least we must admit that there is a great deal to be said for the criticism he urges.

In the main, therefore, we may say that the criticisms against our present economic system, which are urged by socialists and by others who would indignantly repudiate the title, are sound. The disagreement comes with the suggestions for the removal of the evils. We must now turn our attention to these suggestions and endeavor to see what value, if any, there lies in the

various socialist and other programs of social reconstruction.

The Central Idea of Socialism — The socialist programs, multitudinous as they are, have as a rule one idea in common; that idea is that society should not be based upon private enterprise, with the stimulus of private profit. The socialist rejects entirely the idea of competition, and substitutes therefor the idea of co-operation. He removes the aim of profit and in place of it substitutes the aim of service. Where, under the present economic system, private individuals own the means of production, including the land, and where the landless and propertyless part of the population bargains for the sale of its labor, the socialist would have the means of production owned in common, and of distribution on the basis of the needs of the individual. The socialist ideal is that each should receive according to his needs and give (in service) according to his capacity.

Revolutionary Socialism — As we have said, there are many forms of socialism, but we shall distinguish three main divisions. There are those who believe that the competitive system will fall of its own weight. They think that the whole tendency of modern economic development is toward the elimination of competition and the evolution of big businesses, resulting in a concentration of wealth in the hands of a very few people. This concentration will, of itself, produce a revolution against the possession of enormous wealth in the hands of a very small proportion of the population, and the state will take over the responsibilities of production from the hands of those who have con-

trolled it. Those who hold this view are prepared to let the elimination of competition proceed of its own accord until the time is ripe for the national organization to assume control, and they believe that this ultimate assumption, regarded as an inevitable fact, will require a revolution.

There is much that is true in the first contention of the revolutionary socialists. There is an undoubted tendency to eliminate competition — we have already noticed this fact. But because a tendency exists, it does not necessarily follow that it will be carried out to its logical conclusion. Even in the organization of big businesses we have already noticed the fact that if the business is organized on too large a scale the law of decreasing returns comes into force. There is a limit to the size of each industry, as far as the individual plant is concerned. The same is also true so far as the industry as a whole is concerned, especially when geographical conditions are taken into consideration. It would be absurd, for example, to have the street railways of the different cities of this country run by a single national organization, whether that organization be privately or publicly owned.

Neither does it follow that, even if the tendency to the elimination of competition is carried to its logical conclusion, the government will be forced by a revolution to assume operation. Many possibilities may occur in the meantime to give increased control, without actual ownership by the government. Revolutions, moreover, are always dangerous. This does not mean that they are never necessary. The history of the United States shows that sometimes the only

solution of a political difficulty is a revolution. But a sudden change of the form of government or of the economic system is, as a rule, not a thing to be desired. Until recent years, the tendency of socialist thought was against revolution and was directed towards evolution.

State Socialism — The evolutionary socialists, or as they are better called, the State Socialists, believed in the gradual assumption by government of all the means of production. They would begin by securing government ownership of the principal natural monopolies, like the means of transport, the provision of light and power, and so forth, and then gradually extend the scope of government economic effort until all industry was carried on under government ownership. It was taken for granted that the land would be nationalized and then the mines.

In support of the contention that the government could operate successfully the great business organizations the socialists pointed out the fact that already the government carried on great industries. The carriage of the mails alone represents a great business organization. Governments in different countries have owned and operated railroads. In time of war, the government has been compelled to assume control of privately owned industries and, in spite of the difficulties incidental to hurried reorganization, these industries have, on the whole, been efficiently managed.

In the smaller organizations of government like the municipalities, much greater strides have been made in government ownership and operation of industry. Municipal street railways, gas and electric

systems, water systems, and so forth, are common, and they are as a rule, fairly well managed; so well, in fact, that there are very few cases where the municipalities would care to go back to the system of private ownership. Municipal markets, dairies, theaters are becoming commoner every day. To all these instances of socially owned and operated business, the socialist points, and draws the moral that what can be done in one place and with one industry can be done in another and with other industries. All that the state socialist asks is that the governments, including the local governments as well as the national, should gradually increase their economic functions until private enterprise in business and private ownership of the means of production, should cease.

Now this proposition assumes, among other things, that governments are both honest and efficient. If they are neither, there is very little chance of success. If we could be reasonably sure that government officials would only be appointed on the basis of efficiency for their job, and that their administration should be honest, there is no reason to suppose that government ownership and operation of industry would not be considerably more successful than the present method. Honesty and efficiency on the part of government, however, is determined by the interest displayed in government by the people as a whole. Government officials can be dishonest and attend to their own interests, when they know that the supervision of their work is inefficient. When the public only cares for the excitement of politics, and cares for that only spasmodically, as seems to be the case at present, there

is little chance that governments will be really efficient. We are apt, however, to underrate rather than to overrate government efficiency; and at the same time we are just as apt to err in the other direction when dealing with private enterprise. We assume efficiency in private enterprise, and we assume inefficiency in public enterprise. Neither assumption is warranted by the facts. There is an immense amount of inefficient business conducted under private enterprise, just as there is also a great deal of dishonesty. On the other hand there is much careful, painstaking, and really sound work done under national and municipal governments.

The great danger to be apprehended [from government operation, as it has been suggested by the state socialists, is what is colloquially known as "red tape." A great many socialists, having seen the actual operation of government control of industry, in England in particular, have reluctantly given up their ideas. This is particularly true of the labor parties and trade unionists. Before discussing the third form of socialism, we may spend a moment in considering some objections to socialism in general.

Objections to Socialism — Assuming that a socialist state were organized, every one, it is argued, would be on a dead level; there would be no stimulus to increased effort, and therefore there would be little chance of real progress. Government would tend rapidly to laying down the law as to what is to be produced, and those individuals, who were comparatively few in number, would be unable to satisfy unusual requirements. Inventors would have little chance of obtaining

consideration for their inventions, as the government would always be inclined, through its officials, to be too conservative. Hence business and economic effort generally would be inclined to stagnate.

It is generally felt by opponents of socialism that personal initiative, which means so much in progressive civilization, would be lost. There would be no incentive to effort, is the argument, and therefore there would be no effort except the perfunctory effort of the traditional government employee. To these arguments, the socialist replies, first, that there is nothing to support the idea that there would be no personal initiative under government employ beyond the statement of the opponents of socialism, and second, that when these opponents say that there would be no incentive to work, what they mean is that there would be no financial incentive. We have already discussed the question of incentives to work in a previous chapter and noted that there are many besides the merely pecuniary stimuli. Finally it is said that the traditional government employee is merely traditional — he does not exist in fact to anything like the extent that is generally supposed.

In any case the newer socialism provides for a system of control of industry which will secure capable organization and efficient work.

Guild Socialism — The modern idea of what has been called in England, *Guild Socialism*, has much in common with a developed French idea of syndicalism. Perhaps it will be better to start with the French idea first before we attempt to discuss its English and American equivalents. French political philosophers

have been pointing out for the past dozen years or so, that the rough division of economic society into employer and employed is unsatisfactory for many reasons. We are all associated with one another, but there are groups which are closely associated. In fact the greater the advance of civilization, the greater is the number of groups with which one individual becomes connected. A man is closely related with his fellow workers in the trade by which he earns his living. He is associated with his fellow church members, club members, benefit society members, athletic association members, and so on. It is, however, with the members of his particular industry that he is most closely related. This means that the association is not particularly with the craft which he exercises. A man may be a carpenter and be more closely related to the bricklayers who are employed in the same business unit than with carpenters belonging to a different unit. The unit is rather the industry than the trade. It is becoming more and more recognized that the actual workers in an industry must have a greater say in the conduct of that industry than has hitherto been the case.

A satisfactory trade organization will include among its management not only the organizers but also those who are engaged in carrying out the organization, or their representatives. Some of the foremost of the French political thinkers believe that society is tending to become more and more organized into trade groups, each group organizing and controlling its own trade — the railway men controlling the railways, the spinners, weavers, and dyers controlling the textile trades, and

so forth. Already we find the professional classes organized in this manner; the lawyers actually control the legal profession; the doctors lay down the rules under which the medical profession is conducted. Now there is only a difference in degree between control and actual ownership. If all those engaged in the building trades, that is, the bricklayers, carpenters, plumbers, with their executive heads, actually control the industry so that they can lay down the prices to be charged for their product, and the wages to be paid to the members, this amounts to practical ownership of the industry.

The guild socialists of England have had experience of government control and do not wish to add to that experience. They demand the nationalization of the principal industries of the country, but they object to government management. They ask that the industry be controlled by those employed in the industry — the railway workers (using the term *workers* in its broad sense) controlling the railways, and mine workers the mines, the transport workers managing the transport industries in each of the main groups of those industries.

In America we see the development of this idea in the suggestion of the railway brotherhoods in regard to the future control of the American railways. They desire a strong representation on the management board for the railway unions, the whole system being worked so that a good living wage can be paid to all employees and the profits of the system used to reduce rates to shippers.

It is outside our province at present either to praise

or criticize these schemes. It might be suggested, however, that too much stress is laid by guild socialists on the importance of the producers in connection with the industries of a country. After all, the industry does not exist for the sake of the workers, but for the sake of the consumers, and it would hardly seem right to place the consumers at the entire mercy of the producers. Even the suggestion, true as it is, that the producers themselves are the consumers, does not affect the argument. If there is to be such an arrangement as will remove the profit stimulus, there should be representatives on the management who will see that the interests of the consumers are cared for.

Conclusion — In an introductory book it is quite impossible to give adequate consideration to the infinite variety of suggestions for the improvement of economic society. We have attempted to describe society as it is, and to point out the laws under which it works. We have admitted that the results are far from being all that could be desired, and the realization of this fact should in itself be a stimulus to the search for a better organization. There only remains to be said the fact that, whatever be our present suggestions for improvement, they are bound to change as conditions change and as experience shows them to be unsatisfactory. It is just as bad, however, to denounce all new schemes as to accept blindly one panacea or another. Names, whether they be the names of socialism, anarchism, bolshevism, or individualism mean, in themselves, simply nothing. No one is prepared with a satisfactory definition which really covers the whole content of the terms. What we must seek is the

reality behind the label, using careful scientific judgment and not blind passion.

Tub thumping at street corners will lead us no further than ignorant rhetoric in newspapers. In order to amend our society we must first understand it. Our study of economics should serve as a basis upon which to build a real knowledge of the economic structure of the present civilization. It rests with the student to fill in the many and deep gaps which have been left and to apply his knowledge to the task of so reconstructing society that the evils of which we are conscious shall be things of the past.

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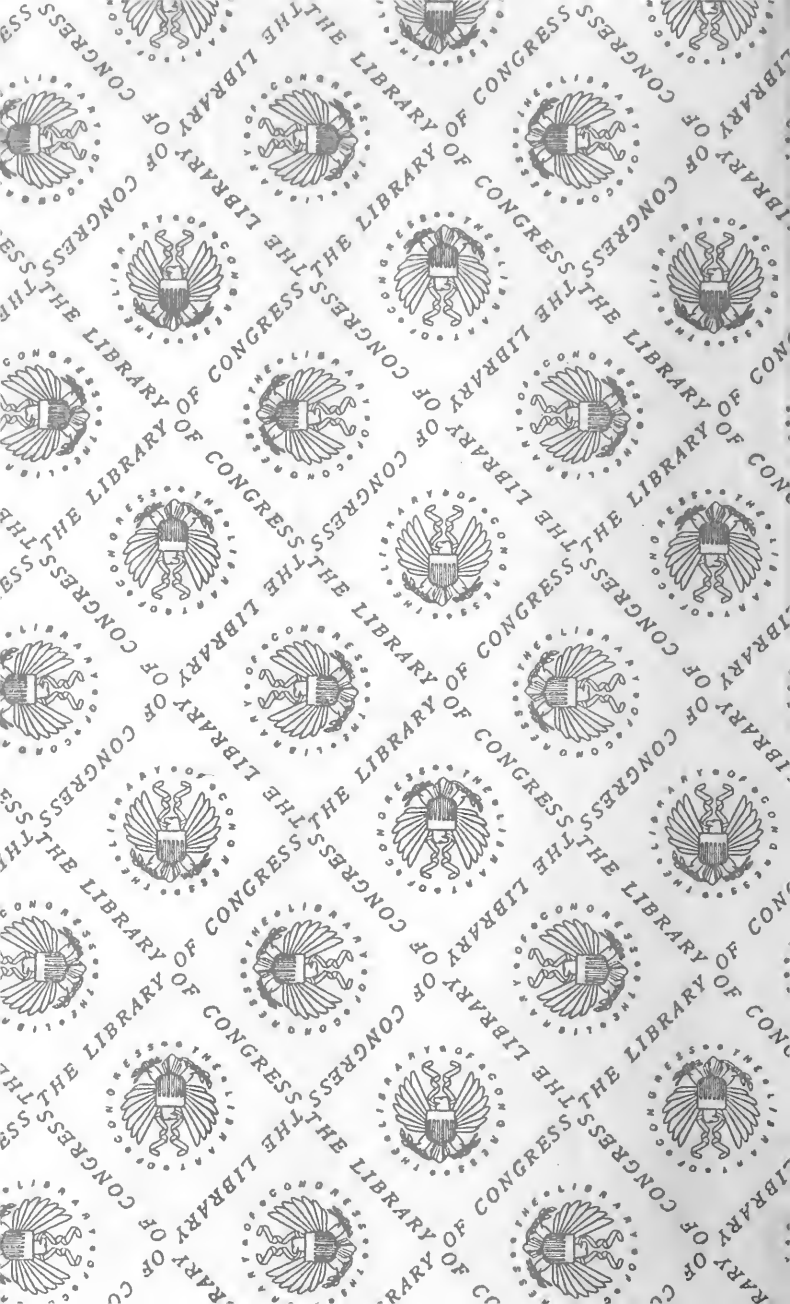
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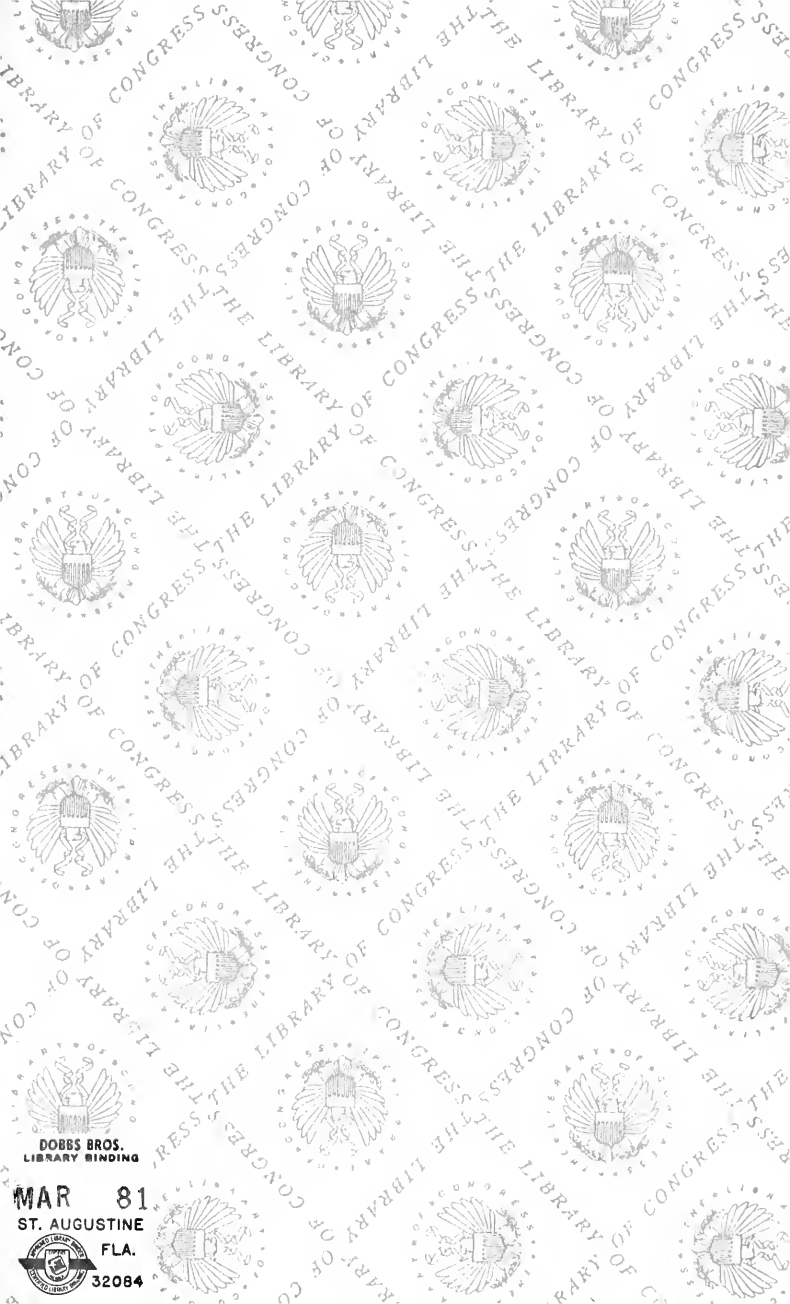
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